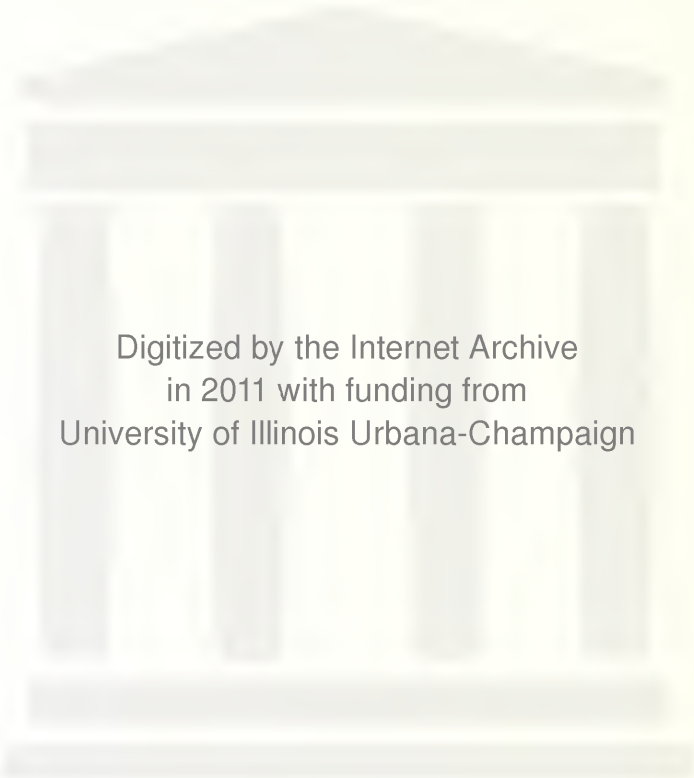

Review of Research in Visual Arts Education

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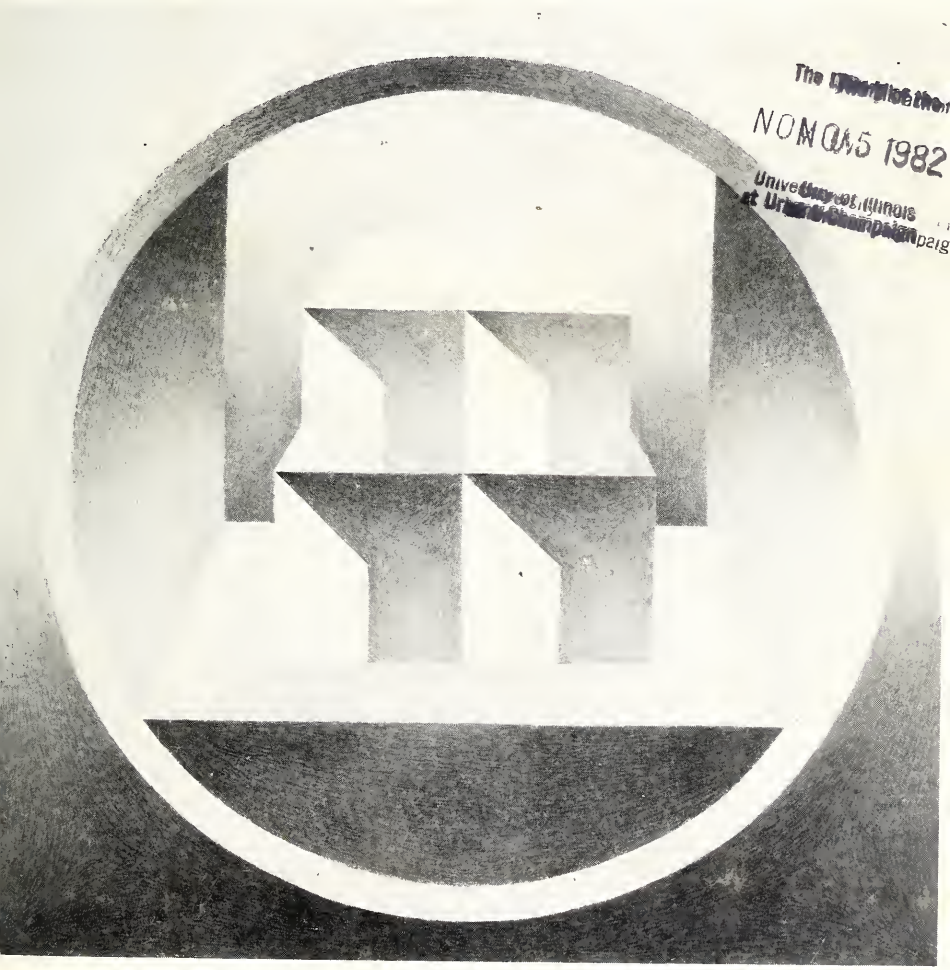

pring 1979

Number 10

Editorial Consultants

Review of Research in Visual Arts Education

Spring 1979 Number 10

The **Review of Research in Visual Arts Education** is published twice yearly (winter and spring) by the Office of Continuing Education and Public Service and the Department of Art and Design, University of Illinois, Urbana, Illinois 61801. Subscriptions are $8.00 for one year; single issues are $5.00. Checks and money orders should be made payable to the **University of Illinois.** Payment must be enclosed. Mail remittance to:

Editorial Office
143 Art and Design Building
4th St. and Peabody Drive
University of Illinois
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Second-class postage approved at Urbana, Illinois.

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Editorial

The first annual Award for Excellence in Dissertation Research was awarded to Maurice Sevigny, Associate Professor of Art Education at Bowling Green State University at the Doctoral Advisers' Roundtable meeting in San Francisco. Maurice was presented the award by Al Hurwitz on behalf of the *Review* for a dissertation entitled "A Descriptive Study of Instructional Interaction and Performance Appraisal in a University Studio Art Setting: A Multiple Perspective." His graduate work was done at the Ohio State University under the direction of Professor Arthur Efland. An article describing the triangulated methodology for studying art classroom interaction developed by Sevigny appeared in the Spring 1978 issue of the *Review* (number 8, 1-16).

In all, thirty-one 1977 graduates applied for the award. In terms of research orientation, thirteen were empirical studies, seven methodological, five philosophical, four curricular, and two historical. Next year's award will be for dissertations completed during the 1978 calendar year. A formal announcement will be distributed next fall.

This issue includes the preliminary report from the Doctoral Advisers' Roundtable Subcommittee on Priorities for Research in Art Education, chaired by Ivan Johnson. The recommendations of this committee provide four broad categories for research in art education that are remarkably rich in content and clearly represent foundational questions for our field to consider. It is apparent that no single research strategy or approach is suitable for all of the recommendations offered by this committee. As we have indicated elsewhere (*Art Education* 29, 2, 23-26) what is needed in art education research is an approach to examining important research questions wherein a series of research strategies would be employed. Since different strategies elicit different sorts of information and tend to compensate for each other's weaknesses, it seems reasonable that together they can provide a comprehensive network of information about a particular research question that no single strategy can possibly offer.

Response to the winter issue has been most encouraging. At this writing the entire press run which included an extra 250 copies has been sold, and subscriptions are at an all time high. So is our mail from readers, much of which suggests that we seriously consider increasing the frequency of publication from twice to three times yearly. In light of the small number of scholarly journals which serve as publishing outlets for researchers in art education, and considering the growing number of articles which are submitted annually to these publications, such a request is understandable. The truth is that we have been examining the possibility of increasing the availability of publishing space for some time. However, the costs associated with such an effort are prohibitive. Our solution to this problem has been to increase the number of pages in the *Review* from 67 pages in issue Number 7 to 105 pages beginning with issue Number 9. This represents an increase of approximately 50% in available publishing space. We believe that the *Review* is the best bargain in the profession. It needs and deserves your continued support. Please make it a point to return the enclosed subscription materials at the earliest date. This will save the expense of a second mailing.

GWH/TZ

PRIORITIES FOR BASIC RESEARCH IN ART EDUCATION — REPORT OF SUBCOMMITTEE B OF THE DOCTORAL ADVISERS' ROUNDTABLE

Ivan Johnson, Chairperson
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Edmund Feldman
University of Georgia
Hilda Lewis
San Francisco State University
Jessie Lovano-Kerr
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A brace of art educators was convened by George Hardiman and Ted Zernich in the Spring of 1978 for the purpose of identifying some priorities for basic research in art education. Panel members were Laura Chapman, Robert Cardinale, Rex Dorethy, Edmund Feldman, Hilda Lewis, Jessie Lovano-Kerr and Ivan Johnson. The panelists faced their assignment with ambivalence. This could be much like re-inventing the wheel since the topic has been labored inside and outside the vineyards of art education for some time. A panel of art educators is not made up of people cloned to think alike, fortunately. This insured a healthy exchange if not exactly new dialogue in which differences and concurrencies gave way to a tentative projection of priorities for basic research in art education.

Prior to 1950, little research, particularly of an empirical kind, was being produced. In the early years we were not sure of our research identity. Were we artist-teachers or were we educators? Early researchers in art education were suspect both in the eyes of the artist-teacher camp and in the eyes of the professional educators. The artist-teacher camp held that scientific research was inimical to the very nature of art. The professional educators doubted our capacity to handle the processes and tools of empirical research. It is not surprising that we have been so long in reaching a point of trying to establish priorities for basic research in art education.

It might be well to note two words used in stating our task: *priorities* and *basic*. There seems to be no question as to what the word *priorities* means even if we have not decided on what they *are*. What is meant by *basic* is another matter. As this writer sees it, basic research is exploratory (not experimental) breaking new ground, producing new knowledge. It may be productive of theories on which applied research may be based. Basic research is not intended to be task oriented. There is a great deal of attention being paid Albert Einstein this year. He ventured into unexplored worlds to create models of theory. He didn't have an application in mind at the beginning nor was he aware even in his later years what applications his findings might have. Basic research is often regarded as that which stabilizes practice, provides technical

guidance and often legitimatizes some accepted practices. Laura Chapman further elucidates:

> Basic research in art education seeks: (a) to map the domain of "art education" and methods of inquiry appropriate to its study, (b) to enhance our understanding of phenomena within some definition of the domain, (c) to publish (make public) both the process of inquiry and the knowledge obtained through inquiry, and to evaluate the assumptions and procedures that govern a, b, and c, thereby assuring that research is open to review, cirticism and refinement. (Chapman, 1978)

Research in art education thus far in its relatively young history has dealt more with how and why students create art than with instructional theory or the content of an art curriculum. Most of the research in art education done thus far has been task oriented. The edges of the domain of art education have often been fuzzy. At times art education research has borrowed much more heavily from the disciplines of sociology and psychology, for example, than from the directly related areas of art and art criticism. The Seminar for Research in Art Education at Penn State University (1966) offered an opportunity for stock-taking. In the past 15 years we have been filling gaps. Our panel decided early on in its deliberations to avoid a gap-filling statement. There was concurrence that within the domain of art education researchers might concern themselves with questions regarding intent or purpose, clarification of meanings and concepts peculiar to what we do in art education, as well as the interrelations of these concerns.

A characteristic of basic research is that it raises as many more questions than it might answer. If a researcher in art education is exploring the unknown, he may be driven by unanswered questions in art as well as education. This might be interpreted as being task oriented but no more so than with Einstein whose pursuits were science oriented. Our panel agreed that the need for basic research in art education is predicted on so many unanswered questions that the best we can do is identify the questions that seem to surface most. The unanswered questions in art education might be said to be those concerned with intent or purpose in art education; concepts upon which we build our theories; behaviors inherent in the act of making or responding to art; and the interrelations of these concerns.

The means we use to answer these questions is not as wide open or undefined as some would have us believe. In practice we usually type our research as descriptive, empirical or historical. According to Laura Chapman the study of modes of inquiry appropriate to the field should be considered basic research because —

> definitions of art education are built from some notion of "the real" (ontology), "the true and how we know" (epistemology), and what counts as "the worthwhile" (axiology) in human conduct and art (ethics and aesthetics). What one inquires into and how one inquires depends on what one seeks and counts as knowledge (Chapman, 1978).

Doctoral students have been known to develop a Pygmalian complex about a particular mode of inquiry, so much so that the selection of the research design obscured the problem it was to solve. Rex Dorethy reminds us that one does not select a method and then research it; one identifies a problem, then devises a research design appropriate to it (Dorethy, 1978).

Let us consider some of the questions raised in the panel discussion. The mode of inquiry, it was agreed, must be carefully chosen to be compatible to the nature of the question. Edmund Feldman and Robert Cardinale suggest this in their positions on needed research in the philosophical and historical domains. Feldman writes:

What suggestions for art educational research can we get from art history? My answers tend to touch on concerns that might as easily be identified with aesthetics, anthropology and the sociology of art. First, I do not believe we know enough about the social influences that enter into the use or consumption of art. What are the economic, ethnic, educational and class factors that shape artistic and aesthetic experience? How is formal art instruction — related to patterns of social living: family formation, child rearing, recreational activity, political behavior, secular activity, the economic climate, class competition, racial rivalry, and so on? Art Historians may deal with such questions tangentially when they discuss changes in artistic patronage. But they seem to be mainly interested in patronage as a factor in an artist's biography or as an influence on the execution of specific works rather than a determinant of the character of artistic styles in general. The art educator, on the other hand, given his wider and more variegated social constituency, might well approach the situation from another direction, that is, by asking how art works and art styles affect users and consumers in specific areas of their behavior. (Feldman, 1978)

One may easily glean from Feldman's position statement some question to which basic research might have the answer. Robert Cardinale dwells more particularly on philosophical research:

> Philosophical research is systematic inquiry into questions of meaning and value related to knowledge in and about visual arts. Systematic inquiry implies a logical system of stating a question or defining an issue or in general delineating a conceptual area to be investigated. Once the question is stated, the investigator must use certain skills such as linguistic analysis, logical argument, and analysis of example to pursue the possible responses or solutions to the question. A classic example on one application of this method of inquiry is (sic) where Morris Weitz defined art as an open concept and then proceeded to show that even though the definition of the concept cannot be closed, past, present and future inquiry is necessary and essential if a continually richer understanding of the nature and use of the concept of art is to be gained. (Cardinale, 1979)

Feldman and Cardinale raise questions that might be best answered by building a theory from which hypotheses (philosophical or historical) could be drawn. Humanistic research is believed by many to be more attuned to studies of problems unique to art education than empirical research. Edmund Feldman observes that:

> Empirical research in art education has not been especially illuminating or useful thus far because (a) the questions it raises are simplistic; (b) the realities of art teaching and learning situations are grossly distorted or misrepresented in the process of factoring out or abstracting what are thought to be their crucial features; (c) the models taken from behavioral research are inadequate for dealing with the complexity of the art object as a system of organized visual signs, as a collection of symbolic forms, as the product of a tradition of artistic conventions and techniques, and as part of a social tradition of work, display, celebration, acquisition, conservation and commodity exchange. In other words, empirical research in art education has not as yet figured out ways of analyzing and interpreting the historical, social and axiological qualities inherent in art objects. Research tap-dances around these crucial factors. At present, we have to conclude that humanistic research (with all its biases and errors of subjectivity) does a more satisfactory job. At least it does not simplify the art object out of existence, reduce it to a stimulus object, or a mere artifact of certain teacher-pupil encounters in a socio-historical vacuum. (Feldman, 1979)

Empirical research is also a widely accepted mode of inquiry for basic research. Tabulations of researches in art education done since 1965 seem to suggest that empirical research is on the increase. Definitions of empirical

research are not hard to come by. Consider Hardiman and Zernich:

> While basic research may be broadly interpreted as the search for new knowledge, we (sic) interpret it to involve the formulation of verifiable general laws based on an interrelated system of propositions that can be rigorously tested for statistical significance and degree of influence. (1979)

They feel as David Ecker that we may not always be able to determine the kind of questions we would research:

> There seems to be general agreement among researchers that much of the work in the field fails to meet even modest interpretations of rigor and quality. Furthermore, a review of past work shows a field having an unreasonable amount of difficulty in separating substantive questions from trivial questions. These circumstances point to the problem of determining what variables are important for study. To truly conduct basic research which examines aesthetic phenomena, researchers must consider the multiplicity of variables which surround this complex behavior. However fervently one claims to deal with wholes, from the standpoint of progress in basic research and the aesthetic behavior in the visual arts, one must fractionate or abstract out certain features of the total behavior being observed. (Hardiman and Zernich, 1978)

Chapman adds some interpretations of her own:

> If the question of definition and determining appropriate modes of inquiry for art education is answered on the empiricism, then one must accept the assumptions undergirding scientific research — determinism, finite causation, the opportunity for prediction and control — as proper bases for the study of human conduct vis-à-vis "art."

Jessie Lovano-Kerr and Hilda Lewis have questioned the modes of inquiry being used by doctoral students as well as the choice of questions they seek to answer. Lewis observes that we still know so little about the young child in art. We have yet to answer questions about how children respond to art, how they make art and what is our role in nurturing both response and learning. Recently Wilson and Wilson have been researching children's drawings. Their research is remarkable in design and productive in findings. They seem to be working toward answering some of Lewis' questions about how children make art and how they respond to models around them.

So many questions were raised by the panel, we were faced with the dilemma of narrowing and organizing our ventures into a manageable form. Chapman suggested that:

> — basic research in our field should be conceived so that the references and phenomena under investigation are "sortable" at some broad level. Research may, in fact, focus primarily on understanding characteristics of persons, or particular kinds of interactions among persons, or the character of matters taken as valuable in art or settings in which art is encountered, or the intents (goals, purposes) of interactions.

All discussions of specific questions to be solved through basic research covered similar ground. Rather than list these, it seemed more prudent to envision broad categories and subsume them with a few questions for illustration. Although many of the questions seemed to imply a mode of inquiry, as it was pointed out earlier, it is the researcher who must find the mode of inquiry to suit the problem.

The broad categories for basic research are:

1. *Intent and purpose of art.* On what premises do we predicate our teaching of art? What knowledge of art is to be gained through art education?

2. *The nature of the discipline of art.* What forces effect the making and responding to art?

3. *Learning behaviors in art.* How

do we respond to art? What makes us create art the way we do? How do we learn in art? What are the critical considerations for differences in ages, sexes, geographical and environmental conditions and teacher strategies?

4. *Evaluation in art education.* How do we know what the effect of art education is on the pupil? How do we know if we have effected knowledge gain? How do we know if the strategies and resources are appropriate and effective in nurturing learning in art?

If these headings seem familiar, they are well-tread ground. We seem to have a ganglia of concepts, partly validated, partly speculative, which sustain us, but we need not call a moritorium on speculation or asking questions. Perhaps we don't need to identify priorities but just be sure we come closer to having concepts in common about basic research.

Reference

Hardiman, G. W. & Zernich, T. Basic research: aesthetic behavior in the visual arts. *Viewpoints: Dialogue in Art Education* **6** (1) 29-39.

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CHASING RAINBOWS AND THE IMPLICATIONS OF RESEARCH

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In the tradition of the Hawthorne and Halo effects, there is a variation of the self-fulfilling prophecy which merits attention. This research phenomena is called the *rainbow effect* and it is found chiefly in the implications sections of research reports. The rainbow effect can be observed when conclusions and implications based on the conclusions are colored by one's beliefs about the utility of the results. These beliefs precipitate speculation about the results to be found at the end of the research spectrum and oftentimes lead to anomalous or erroneous research implications. For example, somebody who believes that creativity is a result of freedom may conclude that classes researched with the most student freedom are the most creative and, therefore, one should provide more freedom of expression in the classroom. In this oversimplified example, an improper inference is made based upon underlying assumptions or concepts which are unclear.

In quantitative research, this kind of erroneous reasoning is found when methods are the basis for inferring implications about ideas or concepts in art and education. Frequently, the statistical form and design of a study is the basis for determining the implications of ideas for art education. These methodological concerns are often the principle basis for lauding variable A over variable B and for extrolling the potential of this variable for art education.

A typical approach might be to argue that A is a research variable upon which little research has been done. But, because A is statistically significant in comparison to variable B or is statistically correlated with B, it is an important determiner or factor in art performance, and data about one's observations of variable A are potentially useful to the educator. This approach is suggested by the following examples:

> Because this study does point to the positive relationship among aesthetic sensitivity, positive art attitudes, and amount of art knowledge, educators and administrators cannot so easily disregard the potentially important role that art does and can play in developing sensitivity. (Anderson, 1971, p. 54)
>
> Since this study suggests that representational drawing skills may be related to a child's perceptual orientation, this implies that art instruction should include strategies which develop the child's abilities to observe his environment analytically (Grossman, 1970, p. 53).

In both of the above examples, the rainbow effect can be seen because, in each, the implication is colored by the expectations of the researcher. Apparently, if variable A is statistically significant in comparison with variable B, it must have implications for art education. However, it does not follow that just because art is correlated with some measure of aesthetic sensitivity that art contributes to it, nor does it follow from a correlation between drawing and perceptual orientation that it will be useful to have the child observe his or her environment analytically. In both cases, the expectations of the researchers led them to infer a conclusion which could not plausibly be reached on the basis of correlational evidence.

Conclusions realized in the impli-

cations of research do not rest on statistical relationships but on logical relationships. To assume a relationship between data and ideas and practices in art education is not to provide logically derived evidence for this relationship, and without such evidence one is merely stating a claim or hypothesizing.

If this is the case though, how does one account for statistical relationships which seem to have *prima facie* "implications" of research as for example when a type of organism consistently dies after eating something? After all, death which is induced is a highly reliable result. It is also a result that has consequences for a particular population or organisms to which the finding can be generalized. Hence, the utility of the finding is a matter of probability or sampling and *not* one of logical inference which characterizes the process of deriving implications. This example is relevant to educational research since historically the emphasis of such research on the reliability or consistency of findings has overshadowed the stepchild of research, i.e., validity. However, the basis for research implications is not the reliability of the results, but the validity or meaning of the ideas under investigation. Especially in social research, it is the meaning of the key concepts being researched that is crucial to one's understanding of events.

Rather than focus on the statistics of variables in developing research implications, one needs to focus on the consequences of the meaning of the variables being studied. Statistics are used to organize data which provide evidence for the conditions to which interpretations of a variable meaning can be reasonably applied, but the implications of an inquiry are based on how these interpretations of a variable can account for data and ideas in other contexts. For example, the implications of work by anthropologists does not hinge on methodology, e.g., statistics, but on interpretations of notions like *institution* and *role* and the utility of these notions in accounting for the data and ideas of different contexts.

Reflect on the work of researchers which has had implications for education and/or art, e.g., Skinner, Bruner, Plaget, and Lowenfeld. Has the impact of their work been based on the collection of facts derived through the design or statistics used, or has it been based on the ideational account of what they were investigating? Clearly, the latter is the case. While the collection of data is necessary for any empirical study, methodology and facts are no substitute for ideas. After all, what implications are there for a study which is methodologically elegant and factually accurate, but conceptually barren? A study which focuses more on advancing interesting ideas to account for the data collected would be by far more useful in establishing implications for art education — even if the data are inconclusive. If there is a lack of sound empirical support for ideas, it does not follow that there can be no implications since these ideas may be of heuristic value in establishing implications. Thus, the lack of conclusive data should not be, used as a rationalization for a lack of implications.

Since implications are not directly derived from data but from interpretations or meaning of a variable which account for the data, there does not seem to be any independent empirical control of the implications. This, however, poses the thorny problem of the relationship between idealism and realism which has been debated for years by philosophers. Categories influence what we see because of what they mean or how we interpret them, but if categories of thought determine what one observes, then there can be no independent control over one's thought and the implications which such thought produces. On the other hand, if one's categories

of thought do not determine what one observes, then what is observed must be formless and nondescript and incapable of providing any test of one's thought and the implications of such thought (Scheffler, 1967, p. 13).

That one's categories of thought influence what one perceives has been established by Jerome Bruner, who demonstrates how one matches what one sees to one's model of the world (1968, pp. 634-662). The influence of mental sets on the world of art has also been poignantly illustrated by E. H. Gombrich in his discussions of style (1969, pp. 63-90). One's motivations and beliefs constantly influence what one sees. However, there is a distinction between categories or terms which designate variables, and beliefs or assertions about these categories or terms. As Scheffler says:

> Conceptualization relates to the idea of categories for the sorting of items, and to the idea of expectation, belief, or hypothesis as to how items will actually fit available categories (pp. 37-38).

A category system is a social convention and it does not prejudge the matter in which these categories are applied to the world. The categories provide the pigeon holes; but it is through hypothesizing that one assigns them (Scheffler, p. 38). Conflicting hypotheses can involve the same categories, for they are merely a different assignment of the same category system. One does not have to exorcise one's categories to make a different hypothesis about the world so that one is not without a means of structuring what is to be seen (Scheffler, p. 39). A viewer is not left in a formless and nondescript world. Moreover, one can grant that perception is categorized without being locked in a subjective prison where observation has no control over one's thoughts for one's hypotheses are grounded in observation. Hypotheses make assertions about what is seen. The test of whether they are true or not is based on the evidence of observation. Consequently, there is independent empirical control over one's thought.

Since implications are rooted in the meaning of categories used in assertions or hypotheses and since assertions about the world can be confirmed or disconfirmed empirically, there is also independent control of implications. But, it does not follow that there are implications just because there is evidence to support a hypothesis since the meanings of terms used in assertions are governed by social convention and are not subject to empirical controls but social use. Hence, if assertions or hypotheses have strong empirical support and the meanings of categories used in the assertions are not clear, what is being asserted or implied is not evident.

Assertions and implications are relative to the use of a category. As the use of the category changes, its meaning changes. This shift in function alters the kind of assertions which can be reasonably made about a category. Terms which have complex social uses like intelligence, creativity, aesthetics, or visual thinking cannot easily be reduced to a stipulated convention such as the classic case of I.Q. equals intelligence, for the limitations of the convention are lost in the many different applications of the term. These changes in function alter the kinds of assertions which can reasonably be made about a category. For example, it would be misleading to make cross-cultural assertions using the term "intelligence" and I.Q. as an index since the use of the term and the meanings which underlie this use are not necessarily the same across cultures. What signifies "intelligence" to one group is not necessarily what signifies "intelligence" to another — a finding which had led some investigations to consider the term a matter of adaption rather than an underlying

ability (Cole, 1971a, pp. 213-216, Cole 1971b, pp. 870-871). Consequently, if one gathers empirical support for an assertion, one needs to determine whether the meanings of the categories used in the assertion are commensurate with it. The truth of the hypothesis has a bearing on the truth of the implications, but the implications will not count for much if the meanings of the categories are inconsistent with the inferences drawn.

In this light, meanings and data are complementary in developing implications. They are the yin and yang of research. They function in this manner, however, when inquiry into the meaning of key ideas or variables is seen as part of the research process. Without such inquiry, there can be no reasonable implications since the ideational basis of the key elements has not been clarified. As has been stated, if an implication is stipulated based on one's beliefs without clarifying what is involved in key ideas or variables, the rainbow effect is likely to be present.

For example, the ideas associated with hemisphere function are frequently not clarified. Instead, implications are hypothesized based on the association between brain processing of visual information and the fact that art is predominately visual. The mere association of two considerations, however, is not sufficient to establish implications. Just because hemisphere functions involve visual processing it does not follow that there are implications for learning and instruction involving visual stimuli, even if one might believe this to be the case. To claim otherwise would be tantamount to assuming implications between two studies just because they both involve elementary school children. What art education research needs is not rhetoric of this kind, for there is no pot of gold at the end of these kinds of rainbows. Instead, we need good ideas upon which to base implications, and we need implications in which the inferences are clearly and logically developed from the meanings of the ideas underlying the data of an inquiry.

References

Anderson, F. E. Aesthetic sensitivity, dogmatism, and the Eisner art inventories. *Studies in Art Education,* 1971, **12** (2), 49-55.

Bruner, J. On perceptual readiness. In R. Haber (Ed.), *Contemporary theory and research in visual perception.* New York: Holt, Rinehart and Winston, 1968.

Cole, M. et al. *The cultural context of thinking: an exploration in experimental anthropology.* New York: Basic Books, 1971.

Cole, M. & Bruner, J. Cultural differences and inferences about psychological processes. *American Psychologist,* 1971, **20** (10).

Gombrich, E. H. *Art and illusion.* Princeton, N.J.: Princeton University Press, 1969.

Grossman, M. Perceptual style, creativity and various drawing abilities. *Studies in Art Education,* 1970, **11** (2), 51-54.

Schefler, I. Science and subjectivity. Indianapolis: Bobbs-Merrill, 1967.

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MOSS ON THE TREE: CANADIAN GRADUATE STUDY IN ART EDUCATION

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> Moss does grow thickest on the shadiest side of the tree. If a particular tree happens to be in the open where the sun can reach it unimpeded throughout the day, the shadiest side will be north. Also to be taken into consideration is the fact, however, that certain growths resembling moss thrive best on the sunniest portion of the trunk. (Angier, 1956, p. 188)

Perhaps the most reasonable characterization of Canadian graduate study in art education is that it is somewhat uneven in density, and irregular in form. In many respects it exists somewhat symbiotically on outgrowths well rooted in the United States. It therefore manifests features of its American form.

Based on my recent limited analysis of graduate programs across Canada in conjunction with visits to four American centers I have been able to develop two classes of evaluative information of unequal value. One class contains quantitative data perhaps of public value for reviewing the form and function of Canadian art education graduate programs while the other class of information is more personally valuable but less easily communicable. This report will present as much as is practicable of both classes of information. Were it not, however, for support and cooperation from two sources there would be nothing to report.

The University of British Columbia's study leave policy and procedures enabled me to set aside the time to travel in search of viewpoints developed through experiences gained by on-site visits. The interest, time, and assistance of my colleagues in Canada and the United States made it possible for me to clarify my perspectives and to see otherwise hidden details and qualities associated with graduate study in diverse regions of both countries. The following persons offered advice, elaborated upon their graduate study viewpoints, and made it possible to generate a quality of idea exchanges unavailable through correspondence or conference meetings. On-site visits were conducted in the following order between September 27, and November 4, 1978.

Elliot Eisner, Stanford University	Sept. 27
Ken Lansing, University of Illinois	Oct. 3
George Hardiman, University of Illinois	Oct. 3
Ted Zernich, University of Illinois	Oct. 3
James Marshall, University of Illinois	Oct. 3
Ralph Smith, University of Illinois	Oct. 4
Cynthia Colbert, University of Illinois	Oct. 4
Guy Hubbard, Indiana University	Oct. 5
Gil Clark, Indiana University	Oct. 5
Harold Pearse, Nova Scotia College of Art & Design	Oct. 23
David York, Nova Scotia College of Art & Design	Oct. 23
Keith Sullivan, Atlantic Institute of Education	Oct. 23
Elizabeth Sacca, Concordia University	Oct. 25
Micheline Calvé, Université du Québec à Montréal	Oct. 25
Andrée Beaulieu-Green, Université du Québec à Montréal	Oct. 26
John Lidstone, Queens College, New York	Oct. 27
Clarence Bunch, Queens College, New York	Oct. 28

John Emerson, University of Toronto	Oct. 31
Richard Courtney, Ontario Institute for Studies in Education	Oct. 31
Ron MacGregor, University of Alberta	Nov. 3

SCOPE AND OBJECTIVES OF THIS STUDY

This study was planned to yield information about the nature of Canadian graduate study leading to advanced degrees in the field of art education. Although the information produced might be of general interest to American university or college graduate student advisers and their students, it probably has greater value for members of Canadian art education departments and other faculty members interested in graduate study. The greatest value of the study, however, exists in what it has provided the investigator. Therein lies a weakness as well as a strength of the study and the report.

On the one hand, data generated were neither critical nor usefully quantifiable, yielding therefore simple generalizations confirming common-sense notions. On the other hand, the stimulating process of departing from an interview schedule of questions to develop and to extend lines of questioning regarding precedents and problems proved to be highly rewarding.

Because the outcomes of this study were not entirely predictable some question sequences and topics developed preordinately had to be abandoned while others were modified and extended. There was no doubt, even in the planning stages that tours and interviews would be highly variable in scope, focus, and sequence. For that reason I had adopted a flexible approach for obtaining and organizing data.

In a sense, I undertook a form of responsive evaluation of the nature of art education graduate study. Responsive evaluation as a research methodology proposed by Robert Stake (1975) requires that the capabilities and the ends-in-view of the evaluator be considered carefully. This I did as a means of justifying the time and money for the study.

Certainly I sensed strengths as well as limitations in my capabilities, but in checking the balance, I planned to use some of the strengths to reduce some weaknesses: that was a major reason for undertaking this study. And, I had several well defined ends-in-view derived from experience.

Experience gained through teaching graduate students and in serving on graduate council committees had given me some important insights about where and how improvements might be made in providing graduate study in art education. Moreover, between 1967 and 1978, circulation of several graduate study position papers from within and without the University of British Columbia Faculty of Education served to reinforce a sense of need for, and the wisdom of, undertaking an evaluation of graduate study programs and practices.

Experience had also taught me that my frames of reference were limited. My ends-in-view therefore became quite simple: to seek enlightenment through asking a selection of leaders these four generic questions.

1. What is the nature of your graduate student population?
2. What influences the selection and deployment of faculty?
3. What governs the development and modification of degree programs?
4. How does the department, or faculty, function relative to other departments or agencies?

From these four generic questions more than sixty inquiries could be developed during each interview. All were designed to provide for an in-depth interview where appropriate, and to permit me to tape record to

note details of a routine nature as well as ideas of major value. Each interview was structured for the purpose of achieving my major end-in-view: I wished to improve my capabilities as both a *connoisseur* and a *critic* in matters of art education graduate study. Such an interlocking function and competence, argue Broudy and Eisner, is needed today.

Harry Broudy, a philosopher of considerable influence in developing art education theory in North America, has noted that a connoisseur is someone to whom little differences can make a big difference (1976). He argues formally that judgment and criticism become more enlightening according to the degree of sensitivity and discrimination one develops as a connoisseur. And, in keeping with this viewpoint, Elliot Eisner develops a useful overview of how one might study the state of the arts in North America (1976).

He recommends that evaluation be performed as a form of connoisseurship and criticism when seeking changes. One may act primarily as a connoisseur, that is, for personal enrichment, or as a critic, making statements to the public. The connoisseur, it is argued, grows in power and is enriched according to how he can become sensitive to subtle variations, alert to meanings, and able to detect forms and relationships. In short, he knows *what to look for* though he need not communicate his perceptions. The additional function of serving as a critic, however, requires that one be able to identify and communicate difficulties and be able to explain what is evident. The critic must know *what to say.*

Quite aside from being sensitive to our local and regional needs and pressures, most of us in art education are aware of concerns similar to our own being expressed across North America by members in our professional field. The need for art educators to know what to look for and what to say has been fairly well presented in articles over the past several years. For example, Harlan Hoffa has provided an insightful review of influences upon research in arts education, and has given a forecast of needs. (1977)

Ross Norris has examined the problems we face in identifying basic assumptions about what is of research consequence and cites the dilemma we face regarding the unavoidability of making "value choices" (1977). Hardiman and Zernich (1977) proposed a 12 item agenda as a focus for examining the nature of doctoral study as it pertains to research. And implicit in Dennis White's analysis of the growth in numbers of doctoral programs in North America, is the notion that the profession should try to anticipate the form and focus of further research programs (p. 6).

To my satisfaction the foregoing viewpoints justified my study in respect to the time and energy I expended and the time and attention I obtained from my participating colleagues. What I have uncovered through my interviews will undoubtedly serve to better my functions as a graduate adviser in art education and can also prove valuable in the further development of the graduate art education program at the University of British Columbia. Moreover, what I share in a written analysis can prove valuable to others in Canadian universities and colleges planning to develop or modify their graduate programs associated with art in education.

The report of this study suffers from limitations arising out of the complex nature and scope of the project and might, therefore, be of limited extrinsic value. The study itself, however, was intrinsically valuable for me because of the dynamic qualities of experiences, sharpening of perceptions, and elaboration of ideas, none of which can be adequately conveyed through print. Nevertheless, what follows is an attempt

to present information and ideas as simply and as effectively as possible.

Study Procedures

Three American universities were selected from those ranked as having ". . . the top ten graduate programs" (Hardiman et al., 1975, p.27). Through correspondence, arrangements were made to spend two days on each campus for interviewing key personnel and graduate students as well as for examining facilities and learning resources. By the end of June 1978, agreement to participate in the study was secured from the following art educators, and by October 5, each had been visited: Elliot Eisner (Stanford University), Kenneth Lansing and George Hardiman (University of Illinois) and Guy Hubbard, Indiana University.

Each participant responded to most of the questions prepared in a questioning guide and agreed to having his responses and discussion tape recorded. When and where practicable, the host participant attempted to arrange for me to meet colleagues and students, to inspect facilities, and then to meet informally or socially.

At the end of the two week period scheduled for these interviews I returned to Canada to analyze and organize the information I had gathered.

This first stage of information gathering provided a useful range of ideas about the nature of current art education graduate programs and served to test the efficacy of the data gathering techniques. Modifications were made where necessary in preparation for visiting five Canadian institutions.

Those persons representing the following Canadian institutions had agreed by mid-June to participate in the study. They were: Harold Pearse, Nova Scotia College of Art and Design; Andrée Beaulieu/Green, Université du Québec à Montréal; Elizabeth Sacca, Concordia University; Richard Courtney, Ontario Institute for Studies in Education; John Emerson, University of Toronto; and Ron MacGregor, University of Alberta.

Visits to these Canadian institutions were conducted between October 20 and November 4, 1978. Some of the original questioning patterns and topics in the guide were altered to suit Canadian interests and values. Fundamentally, the Canadian and American visits and interviews were conducted in an identical manner.

Between June and August 1978, arrangements were made to visit Keith Sullivan, of the Atlantic Institute of Education in Halifax, and John Lidstone, of Queens College, New York City. In Montreal, Elizabeth Sacca arranged an interview for me with Micheline Calvé, of the Université du Québec à Montréal.

Presentation of Findings

As stated earlier, two classes of findings were generated in the course of this study. Much information was neither susceptible to quantification nor probably of interest to a wide population of art educators. Few findings, therefore, warrant detailed publicity. What could be of interest, however, might be a few generalizations derived from counterpoised discussions about students, programs, research, and needs of the field according to what I heard from a small sample of leading American art educators.

Following these few comments is a list of Canadian institutions offering graduate study in art education. Important aspects of each institution are presented to indicate the relative scope and influence of the institution.

Similarities and Differences among American Institutions

Entrance requirements for doctoral programs do not vary significantly. Several years of teaching will be required unless an applicant has a clearly

TABLE 1

American Program Magnitude, Fall, 1978

Institution	Faculty	Graduate Students Enrolled in Art Education			
		M.Sc.	M.A.	Ed.D.	Ph.D.
Stanford	1	0	10	0	13
Illinois	5	0	35	5	0
Indiana	5[a]	70	0	9[b]	0

[a] The five art education faculty members work with fifteen teaching assistants.
[b] Thirty students are admitted to the program currently.

defined career goal of a non-classroom nature; for example, in museum or community arts education. Then an applicant would be required to provide evidence of relevant work experience.

At Stanford, an applicant's accomplishments and demonstrated abilities will be rated by three faculty members who assign numerical values under five to six categories. At Illinois a personal interview is required early in the application process.

Each institution provides a range of suitable elective courses as part of a student's doctoral program. At Stanford a student is required to take the three art education courses and a seminar in art education research for doctoral students, all serving as the core requirements for the degree. Just over one-third of the Illinois degree requirements are met through art and art education course work bearing titles almost identical to the Stanford core requirements. Another 30% of the Illinois program content must be made up of courses given in education.

The courses required at Stanford are:

1. Foundations of Aesthetic Education.
2. The Artistic Development of the Child.
3. Curriculum Development in the Visual Arts.
4. Seminar in Research in Art Education.

Similar courses required at Illinois are:

1. Development of Aesthetic Judgment in Art.
2. Aesthetic Inquiry and Criticism in Art Education.
3. Issues in Art Education.
4. Curriculum Development in Art.
5. Special Problems.

At Indiana, the completed doctoral study requires 90 semester hours beyond the work for a baccalaureate. Approximately 30% of the required course work must be foundational for the dissertation. Five art education courses from among twelve stipulated are: history, philosophy, psychology, art education research, and survey of research in art education. A minor in fine arts, which can include studio activity, is required for the doctorate and can constitute another 30% of the program.

Eisner diagnosed problems or weak aspects of art education scholarship today relative to possible needs in the future and suggested that new modes or forms of inquiry be developed for our field. These changes should be based on perceptions of what the field is, from within the field, to determine our unique needs. Hardiman and Zernich, while acknowledging the need for developing alternate research strategies, choose to emphasize basic research in their program, and choose also to restrict their area of investigation. They discussed the need to develop a healthy respect for what constitutes one's area of academic strength, expertise, or competency.

This is not to say, however, that Eisner does not exhibit the same degree of awareness and responsibility. On

the contrary, Eisner's approach is to seek expertise for a student wherever it can be obtained: across faculties, off campus, or from other relevant professions. The nature of facilities and personnel available at Illinois, however, permits Hardiman and Zernich to develop a reasonably self-contained but campus enriched research program. If I dare characterize the difference between these two programs I would use Robert Stake's terms, preordinate or responsive.

Hubbard's program at Indiana, like Eisner's, I consider responsive. At Indiana one might focus on the nature of art education field practices, art criticism, curriculum development, or multi-cultural issues. These represent the faculty strengths and balance Hubbard considers appropriate for his institution.

In summary, the American visits foreshadowed what I might find — except for one major element — when visiting Canadian institutions. I had found one predominant theme with variations and counterpoint. This I could find in Canada, too. Missing, however, would be the tempo: the major element of experience and much of a history of graduate study in art education.

Visits to Canadian Institutions

NSCAD: Nova Scotia College of Art and Design, Halifax. Participants, Harold Pearse and David York. Their program is less than two years old. Between 1978 and 1979 the first student to graduate from the program will have earned a Master of Arts in Art Education.

AIE: Atlantic Institute of Education, Halifax. Participant, Keith Sullivan. The Institute has been operational for four years, and in June of 1978 awarded its first Ph.D. degree through the "Open Access Study Plan." The degree, however, was not in art education.

Concordia: Concordia University, Montreal. Participant, Elizabeth Sacca. Concordia was created in August 1974 through a merger of Sir George Williams University and Loyola College. The Ph.D. program there is approximately two years old and has not yet produced a Ph.D. graduate.

UQAM: Université du Québec à Montréal. Participants, Micheline Calvé and Andrée Beaulieu-Green. Their program is only two years old and will be graduating its first degree holders during 1978 and 1979. The highest degree offered is the maîtrise en arts plastiques: l'option éducation, a Master of Arts degree in Education.

OISE: Ontario Institute for Studies in Education, Toronto. Participant, Richard Courtney. A degree granting relationship has been developed between OISE and the University of Toronto. The OISE-University of Toronto degrees earned in art, or *arts* education represent study in educational theory in the Department of Curriculum. The Ed.D. is designed for high levels of practice and the Ph.D. is earned through demonstrated high level scholarship. Presently in Ontario only OISE offers the M.Ed. degree in a subject matter field.

U. of T.: University of Toronto. Participant, John Emerson. Emerson described the work he does in providing study for a post baccalaureate degree, a B.Ed., in which some art curriculum specialization is available. For more intensive specialization, or for graduate work in research and development, a student can apply to OISE.

U. of A.: University of Alberta, Edmonton. Participant, Ron MacGregor. Last year this university made history, according to MacGregor, in awarding the first Ph.D. degree in art education from a Canadian university.

UBC: University of British Columbia, Vancouver. Resource, James Gray. The Master's program has been active for approximately 20 years. Only recently has strong attention been given to developing the interdepart-

mental Ed.D. program in art education.

The visit to New York to confer with John Lidstone and Clarence Bunch of Queens College, N.Y., was fitted into the Canadian itinerary as a matter of travel convenience. As a leading art educator in the United States and as a Canadian who still maintains an active interest in the nature of Canadian art education, Lidstone was able to discuss his metropolitan New York perceptions in respect to their possible implications for Canadian art education practices.

Because this limited study was exploratory in nature I was unable to include information about what could be classified as art education graduate study in such institutions as the University of Victoria or Carleton University, to name just two. The problem of conducting a comprehensive survey or examination I leave to others. Indeed, through pointing out inadequacies in this report and in supplying corrective information someone else could be performing a valuable service.

Problems of identification, labels, and terminology exist when trying to present a Canadian overview. Without explanation, Table 2 can give several false impressions about faculty expertise. For example, the Atlantic Institute of Education provides an Open Access Study Plan using a core faculty of 13. No art education expertise is available from that faculty, but instead, from outside sources according to where a student receives permission to study.

Technically the entire graduate faculty of the Ontario Institute for Studies in Education becomes a student's pool of expertise although in fact the student would receive direction from a small committee of OISE faculty. Moreover, the student has the option of taking some external course work under the aegis of OISE.

The following comments are like those based on the American interviews and represent salient aspects of extended discussions. Out of context they can yield publicly only a portion of their value in the overall discussion. Where possible I have paraphrased the participant's comments.

Similarities and Differences among Canadian Institutions

In common with UBC, the AIE, Concordia, NSCAD, and UQAM have yet to see the first graduates from their respective new programs. The Ed.D. candidate at UBC is undertaking interdepartmental studies while the AIE candidate is studying for a Ph.D. degree. Each of the eight candidates at Concordia is working for a Ph.D.,

TABLE 2

Canadian Program Magnitude, Fall, 1978

Institution	Faculty[a]	Graduate Students Enrolled in Art Education			
		M.Ed.	M.A.	Ed.D.	Ph.D.
NSCAD	6	0	8	0	0
AIE	13[b]	0	0	0	1
UQAM	1.5	0	7	0	0
Concordia	5+	0	55	0	8
OISE	150+[b]	50	4	2	0
U. of T.	2.5	0	0	0	0
U. of A.	5	3	0	0	2
UBC	10	14	10	1	0

[a] These are art education faculty members who teach or advise graduate students.

[b] See the text of this paper for an explanation of these figures.

and those students about to graduate from either the NSCAD or UQAM will be earning Master in Arts degrees. Considering the graduate program magnitude in Canada and the portion of it yet to become visible, it is no wonder that one hears, "What graduate programs?"

Four Canadian institutions have responded to needs of their respective constituencies by developing flexible programs and by utilizing resources beyond those on their own campus. This responsive attitude was advocated in the United States by Eisner with reference to making theory and practice consonant; by Lansing in respect to encouraging work in classrooms and in studios as a means of enriching practice and scholarship; by Hubbard in the way he saw the function of his overall program; and by Lidstone who was highly specific in his analysis of academic self-interest vis-à-vis field needs.

The Nova Scotia College, for example, requires field experience in conjunction with its inquiry course. The Atlantic Institute encourages scholarly study of field-based problems. The Ontario Institute places considerable value on "experiential" course work related to field activities. And Concordia acknowledges the need to work within a culturally diverse framework. Moreover, these four institutions insure that students are enabled to work in a larger intellectual community than the one provided by each alone.

Discussion about improving the nature of Canadian graduate study in art education brought forth several notions. One participant affirmed that we should work within the obvious constraints of having a small population covering an immense area. We should, therefore, identify Canadian problems and develop Canadian approaches, avoiding U.S. patterns: "avoid trying to make or be carbon copies." Another participant warned, however, that there can be nothing common among Canadian viewpoints and that we must accept and work with the reality of our cultural diversity.

Nothing in the interviews leading to the foregoing was stated in an anti-American spirit, but instead, as an admonition to become more self-reliant in developing scholarship. To appreciate the benefits we have gained from elsewhere and the supply lag we face in Canada one has only to consider the number of university art education positions occupied by Canadians who earned their doctorates in the United States. I estimate that at least 15 art education doctorate holders work in the institutions I visited in Canada. To my knowledge, only one earned his degree in Canada.

The need to know what is being tried and what is being accomplished in Canadian art education graduate study was keenly felt by participants. Most urged that better lines of communication be developed. This need was discussed by each participant not only in respect to how a wider and more complete frame of reference would be personally illuminating, but also in respect to counseling graduate students. Each person wanted to be informed about Canadian graduate study problems and prospects but, for several good reasons, seemed unable to locate any useful documentation.

Reasons for this lack of self-awareness nationally seem simple but often ignored. For very sound academic reasons we monitor and participate in American art education activities. And for obviously good reasons we use American resources and expertise in our graduate teaching. The prominence, accessibility, and high quality of these physical and conceptual tools of the trade distract us from developing our own necessary equivalents.

Implicit in most of the graduate degree required courses encountered in this study are the expectations that

students will become informed, enlightened, and productive. To do this, according to Sacca, "students reflect upon issues and problems, improve upon teaching, and articulate art education theory and criticism." Implicit too, in comments by Eisner, Courtney, and Lidstone, is the criticism that some academics and art(s) educators are themselves in need of doing for themselves what they would have their students do. The three educators made similar observations about the importance of having broader viewpoints regarding the nature of research, its focus, its content, and of evolving relevant values and criteria pertaining to research.

MacGregor, while advocating that the nature of the Ph.D. be considered relative to the changing needs of education as a field of study, also cited its importance as a research degree. In some respects his values were similar to those of Hardiman and Zernich regarding the development of basic research in art education. And, MacGregor argued well for increased financial support by teacher groups and other school agencies to further basic research and to provide effective application and development. MacGregor sees the needs of the university and field as compatible if each constituency can understand its responsibilities and capability. Those understandings are not easily achieved, however.

In respect to understanding and communication, I encountered difficulties which reduce the amount of detail in this paper. While crossing Canada and during my American visits I became aware that the concepts of research and its bearing on the nature of the doctoral degrees were too variable to warrant useful generalizations. Moreover, the implied rationales for offering Ed.D. degrees or Ph.D.'s, or M.Ed.'s and M.A.'s were hazy. Findings, therefore, about such matters as thesis requirements, dissertation committees, and adjudicating procedures were interesting to me, but not of generalizable value.

Discussion

What I have reported is a reflection of my values and interests regarding the nature of art education graduate study in Canada. My views are expressed relative to a sample of current developments and outlooks in the United States. This document reveals only partially what I have been examining in my efforts to become first, more of a *connoisseur* on the subject and second, better prepared as a *critic*. Not surprising then, is the limited discussion and absence of any statements of implications. Instead I draw attention to several isues and problems still needing clarification and resolution, keeping in mind that one institution's present problems represent chapters in the history of accomplishments in other institutions.

The association of the Ph.D. with "scholarship and theory" and the Ed.D. with "practice and field directed decision-making" seems faint among several institutions. The Ed.D. and the Ph.D. programs both offered at OISE are designed for clearly different career purposes. The Ph.D. program at the Atlantic Institute seems to represent a strong field focus, while the Ed.D. program at Illinois seems oriented toward basic research. At the University of British Columbia the subtle distinctions, and territorial rights, are still maintained and in fact, a Ph.D. is not offered.

Approximately 12 years ago Dean John Goodlad of the University of California — Los Angeles Graduate School reported to then Dean of Graduate Studies at U.B.C., Ian McTaggart Cowan, that under given conditions the Ph.D. be authorized after development of a number of appropriate programs. In part of his clear analysis and within his explications he stated

that "the distinction between the Ed.D. and the Ph.D. should be . . . not one of status, but one of *function*" (1967, p.8). This document has existed as a set of blueprints detailing subtle arrangements for achieving useful changes. There has been very little building based on the specifications. Some of the Goodlad distinctions and rationales would sound familiar to art educators since they are consistent with those of Eisner regarding recommended graduate study for art education. (Eisner, 1965)

To discuss the quality of graduate study is to discuss the nature of the immediate and the ultimate beneficiaries of advanced study and therefore, of an institution's obligation to a past, a present, and a future society. Two consequent obligations sometimes constrain art educators: one of working to uphold institutional academic or professional responsibility, and the other, of being socially and professionally responsive. On the one hand the university is charged to conserve social values and to set standards of scholarship excellence, and on the other, to develop flexibility, become experimental, and promote innovation.

Somehow, somewhere, the art educator — according to many comments made during the interviews — must function within several academic jurisdictions, focus attention on significant theory and practice elements across time, and meet a range of needs among several populations. Such demands, according to Hardiman and Zernich, tend to weaken a faculty member's expertise and the quality of an institutions's research mission. To Hubbard, however, these challenges can become vitalizing for art education. To Eisner, meeting such demands entails better development and adaptation of *theoretical* and *practical* elements of art, education, teaching, and learning, toward the synthesis of a more useful concept of art education. Such a major job, if completed successfully, would perhaps reduce difficulties encountered in the present multifaceted world of art education graduate study.

Although Courtney, Lansing, and Lidstone diagnosed problems and suggested remedies for some of our present questionable practices, several of their ideas might be strategically inappropriate at this time for economic reasons when declining enrollments and tax-cuts generate conservatism. In Canada, however, the time might be right for making adjustments and for conceiving differing patterns for graduate study. For, as MacGregor has said, "Our attempts to develop our programs come at the wrong time. . . a bust time, yet, perhaps being small, slow and steady will ensure quality."

Recommendations

Art educators acknowledge the importance of being informed about the nature of all levels of art education in North America. Canadian graduate study in art education is an educational phenomenon neither clearly examined nor adequately reported. It would seem prudential therefore to conduct a detailed analysis of the nature of that phenomenon and to publicize the results of such a study.

Canadian art educators claimed that while they were interested in the nature of Canadian art education graduate study programs, they had no generally available reference material to provide information. One means of obtaining relevant data is through construction and employment of a survey instrument. It would seem useful therefore to conduct a survey and to write a report for interested parties.

I therefore recommend that a comprehensive analysis of Canadian graduate study in art education be conducted through appropriate means and that the results be made public to interested persons in North America.

References

Angier, B. *Living off the country: how to stay alive in the woods.* New York: Collier Books, 1956.

Broudy, H. The case for aesthetic education. In Frances D. Hine (Ed.), *The aesthetic eye: generative issues.* Los Angeles: Aesthetic Eye Report, Los Angeles County Schools, 1976.

Eisner, E. W. Graduate study and the preparation of scholars in art education. In W. R. Hastie (Ed.), *Art education: sixty-fourth yearbook of the national society for the study of education* (Part 2). Chicago: University of Chicago, 1965.

Eisner. Educational connoisseurship and criticism: their form and function in educational evaluation. *Journal of Aesthetic Education,* 1976, **10** (3-6), 133-150.

Goodlad, John I. *Report on the matter of offering the Ph.D. degree in education.* Report to the University of British Columbia Dean of Graduate Studies, December, 1967.

Hardiman, G. W., Shipley, J. R., & Zernich, T. A ranking of graduate programs in art education: an exploratory view. *Art Education,* 1975, **28** (4), 26-27.

Hardiman, G. W. & Zernich, T. Editorial. *Review of Research in Visual Arts Education,* 1977, (7), v.

Hoffa, Harlan. The history of an idea. In Stanley S. Madeja (Ed.), *Arts and aesthetics: an agenda for the future.* St. Louis: CEMREL, Inc., 1977.

Norris, Ross. Research in art education. *Review of Research in Visual Arts Education,* 1977, (6), 34-52.

Stake, Robert (Ed.). *Evaluating the arts in education: a responsive approach.* Columbus: Chas. E. Merrill, 1975.

White, Dennis W. An historical review of doctoral program growth and dissertation research in art education 1893-1974. *Studies in Art Education,* 1977, **19**(1), 6-20.

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AN EPISTEMOLOGICAL APPROACH TO CHILDREN'S DEVELOPMENT IN ART (IMPLICATIONS OF PIAGET'S GENETIC EPISTEMOLOGY FOR ART EDUCATION RESEARCH)

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Research in children's drawing development has been pursued for almost a century. Except for the research conducted by Jean Piaget and the Geneva school, however, no single explanatory theory accounts for all the factors that constitute development. In art education literature there are references to *developing* aesthetic awareness and *developing* creative abilities, suggesting that *development* is involved. There is abundant evidence that children's drawings change in relation to maturation and environmental (learning) experiences. There is even general agreement among opposing theoretical positions about the kinds of drawings children are apt to make at certain stages of development. Yet, despite a plethora of theories and vast reams of data, the critical question, how development occurs, remains a mystery.

This essay maintains that the dilemma of traditional dichotomous conceptions about the nature of reality and knowledge is inherent. These conceptions have such a lengthy history that they seem entirely reasonable. On the other hand, principles and methods of the classical natural sciences that tended to support such concepts have long since been found to be mistaken. Contemporary scientists have replaced the naive mechanical world-view of Newtonian physics with more abstract schemas that extend our understanding of the universe and life in it, even to understanding the nature and origin of consciousness and the knowing mind. Piaget's theories of knowledge and development provide a means of bringing the understanding of mind within the realm of the intellectual revolution that accompanied the change from absolute concepts in a static world to theories of relativity and atomic physics. My aim in this essay is to discuss the limitations of the traditional framework and to demonstrate how Piaget's *Genetic Epistemology* resolves the paradox that has been the stance of theories of art and psychological research for some 300 years. My thesis is that art is a mode of constructing and organizing knowledge that not only originates with intellectual development but also presupposes it.

The great pitfall of art education is the gap between aesthetic theories concerned with attributes of art and the actual issues and problems of art. What compounds the problem is the spurious notion that mind — human consciousness — can be understood in terms of absolute 'facts' which form a realm of knowledge apart from human values. Theoretical assumptions in art education stem from two interrelated sources: the prevailing conceptual framework of the science of behavior and theories of art holding that aesthetic experiences occur apart from ordinary perception or commerce with the world. Both are derived from the Cartesian notion of mind as an immaterial essence (psyche, or soul) oscillating between subjective and objective poles of reality. Internal, subjective realities were concerned with values and "higher" purposes, while external, objective realities were concerned with discovering "laws"

in the material world — a material world that consisted of absolute matter embedded in absolute time and space. The mechanical nature of the material world provided Newton with principles and methods for rigorous scientific investigations. A world in which matter consisted of distinct, independent substances that were moved only when one body came in contact with another led to "objective" laws that seemed to remain constant. Every event had a direct cause, and the classical physicist could easily predict and reproduce events to prove or verify hypotheses. Although there were inconsistencies in the underlying dichotomy, it had the advantage of resolving the conflict between science and religion: because it was assumed that only the material world could be reduced to predetermined mechanisms, purpose and meaningfulness belonged to the realm of the mind. Thus, the scientist occupied himself with the external world of 'hard' facts and the theologians concerned themselves with moral issues.

Until the Eighteenth century, philosophical systems dealt with art either in terms of aesthetic pleasures according to Aristotelian principles, or in terms of a philosophy of beauty as theoretical knowledge. However, the subject/object dichotomy posed a paradox in the phenomena of beauty: in one sense, beauty was assumed to be a moral, metaphysical experience occurring in the mind; in another sense, beauty was palpable, a material experience part of everyday life. If art was to be seen as theoretical knowledge, it would be necessary to analyze it in terms of the logical rules to which it adhered. But a logic that consisted of independent parts would not conform to a logic of the whole. In his *Aesthetica,* Baumgarten attempted to resolve the problem by assuming a logic of the imagination and a logic of the intellect. Since imagination could never attain the dignity of intellect, because it dealt with the 'lower' sensous aspects of knowledge, art could be seen as figural expressions of moral truths that were distinct from the logical functions of the intellect.

Eighteenth Century Philosophy

The question of pleasure was variously dealt with by Eighteenth century philosophers. For the Empiricists, pleasure had two connotations: interested pleasure for the sake of lust and disinterested pleasure for the sake of virtue. For the Rationalists, art had little meaning except as it revealed higher truths. For the Idealists and the Romanticists, all knowledge and all pleasures, including art, originated from inner feelings, faith or intuitions which affirmed the existence of God. In an attempt to resolve the extreme difference between the various points of view, Immanual Kant constructed a theory that proposed that pleasure, the aesthetic experience, originated in sensory impressions separate from and independent of other forms of 'true knowledge.' In this sense, Kant provided the basis for a theory of art that seemed to resolve the subject/object paradox; Kantian aesthetics provided the basis for a separate system of philosophy that came to be known as Aesthetic Philosophy.

While Kant's synthesis seemed to resolve the gulf between the extreme positions of the Empiricists, the Rationalists and the Idealists, it also succeeded in revealing some of the fundamental contradictions that were implicit in them. The conflict between the notion that ultimate truths could only be revealed to the mind through science, and the notion that ultimate truths revealed themselves only through human feelings and faith, tended to be reinterpreted in view of Kant's theory. Indeed, the notion that feelings, in the sense of Kant's "pure" aesthetic experience, were not subject to the same conceptual judgments as other

realms of knowledge opened the floodgates of imaginative speculation. In a world in which the intellect was no longer the final appeal to truth, emotions and faith and wishful thinking about the superior capacities of man gave rise to metaphysical and idealists theories whose flights of fancy rivaled those of the scholastics in an earlier era.

In a more positive sense, Kant's theories about the relationship between the mind and knowledge provided an approach to mental functions that bear a close resemblance to later theories formulated by the various schools of gestalt theory, Freudian psychoanalysis and even Einstein. Kant's basic idea was that man could only know and interpret the world in terms of the forms and powers of his own mind. In contrast to Empiricist theories that 'objective' concepts of taste and feeling were discoverable in the external world, Kant held that aesthetic experiences could only be derived from sensory impressions directly from the object. "For every judgment from that source of aesthetic, i.e., its determining ground, is the feeling of the Subject, and not any concept of the Object." Unfortunately, most thinkers of the era, including Kant, were convinced that mental phenomena and sensory experiences stemmed from different realities for particular forms of knowledge. Instead of discouraging the extreme positions, the absolute ideas, and the contradictions, the classic dualisms between mind and matter, tended to be perpetuated (Zweig, 1970).

Although most writers in aesthetics found limitations and difficulties in various philosophical approaches to mental phenomena, it was generally assumed that mental functions were so complex that it was necessary to assume that certain knowledge about how the mind functioned was simply not accessible to empirical investigation . . . particularly since questions regarding meaning and value were not reducible to 'facts.' The difficulty stemmed largely from the ambiguous distinction between the concept of an object and the feeling of an object. Kant defined different kinds of knowledge in terms of the primacy of perception from which impressions are then submitted to conceptual judgments, a process of logical deductions, that give rise to ultimate truths. The direct impression of an object was the source of aesthetic sensibilities apart from the concept of it. For example, he rejected the notion that things are beautiful because they are perfect. The idea of perfection involves a prior concept of the properties a thing should have. If one judges a thing to be perfect, the judgment is made on the basis of a prior concept and it is therefore not an aesthetic judgment. The distinction between prior concepts and "pure" aesthetic feeling was defined in terms of two kinds of beauty: beauty that is dependent upon a particular use and beauty that is independent of any conception of usefulness or perfection, i.e., purely aesthetic.

While Kant's distinction between disinterested and interested pleasure seemed logical, the ambiguous distinction between useful beauty and "pure" aesthetic sensibility gave rise to theoretical excursions that ranged from discourse on art for art's sake to lengthy dissertations on intentionality and purposeless thought. Although Kantian philosophy provided aestheticians with notions that works of art could be seen and valued in terms of standards specific to art, the accumulated doctrines and genial insights tended to produce more speculation than verifiable theories. "The usual sign of confusion in our basic ideas on any topic" noted Susanne Langer, "is the persistence of rival doctrines, all many times refuted yet not abandoned . . . In a system of thought where

the basic concepts are not clear, conflicting outlooks and terminologies continue, side by side, to recruit adherents" (1953, p. 3). All hypotheses and theoretical formulations rest on foundations, conceptual frameworks, in which propositions about reality are tested for truth or falsity. When the conceptual framework tends to produce more questions than answers, when new propositions fail to verify or disprove existing ones, then it can be said that the intellectual venture in which they belong are invalid, that the framework to which they adhere has been exhausted.

Concepts of Science

In the physical sciences, the conceptual framework based on the notion that the 'data of sense' revealed "objective laws" in a reality apart from the observer was eventually found to be inadequate. The discovery that the atom was divisible and that matter and energy were not independent entities led to new concepts about the nature of the physical world. For atomic physics the principles and methods of Newton's mechanical world view were replaced with more abstract schemas concerned with the structure and the laws that govern the changing patterns in the structure.

For the science of psychology the fundamental questions derived from the dichotomy between inner and outer realities, between subject and object, between feeling and intellect, gave rise to a host of schools of thought about the nature of man. Together with the mechanical model used in the physics laboratory, early investigations began with classifications of the 'data of sense' and the principle that what was "given" was logically necessary. The scientific psychologist was assumed to be a neutral observer gathering 'facts' in a material reality, apart from considerations of values and subjective feelings. For traditionally oriented thinkers, theologians, idealists and others with metaphysical approaches to the nature of man, those who were concerned with the radical distinction between the soul (inner realities) and the material world, the scientific methods of the new science provided a means of keeping the mind safe from materialist reduction. For one school of psychology the inner/outer dichotomy provided a path to assumptions about the psyche, libido, and introspective processes, which were metaphysically distinct from material entities. For another school of psychology, the principles and methods borrowed from the physics laboratory were found to be too difficult to apply to Descartes' *res cogitans.* Mental events are so bound up in the living organism that they were not accessible to empirical investigation. On the other hand, what could be observed was behavior. Behavior was not only observable, but the similarity between animal and human behavior also suggested that data gathered from the study of animals could be generalized to humans. More importantly, animal behavior could be manipulated and controlled so that experiments could be repeated and yield predictable data. The success of the new psychology of behavior provided the basis for further elaborations of the mind/matter duality, which in turn, led to various schools of thought all of which attempted to resolve the paradox of the subject/object dichotomy.

Typically, in current art education literature *science* is seen as a discipline concerned with "ideas with endurable meaning" that can "explain and predict" (Eisner, pp. 237-255), while philosophy, particularly aesthetics, is concerned with human values. The classical principle that a rigorous description of nature could be pieced together from separately verifiable 'facts,' like a mechanical puzzle, led to the assumption that the scientific model of behavior is necessarily an

artificial model designed to fit selected "given" events. In those instances "when the model and events do quite fit, the events must be tailored to the model." According to Dember and Jenkins (1970, pp. 25-35), the intent of the tailoring is that certain data will be "judiciously ignored" so that particular aspects of behavior will provide a reasonable approximation between reality and the model. The expectation is that by means of an unending process of "successive approximations" more and more data will be incorporated until the "scientific model represents, but need not resemble, the observable events of that segment of the world which is the province of a particular scientific discipline."

According to Eisner, the objective of scientific studies is to produce "facts" in the form of statistical data which may be "artfully transformed to fit the concrete reality of life in a particular classroom . . . if the findings of research are to be applied, (the teacher) must be able to recognize the instance in which research findings are applicable and then must be able to invent a situation" to which they can be effectively applied. The notion that scientific inquiry is distinct from "humanistic" research is explained as a distinction between studies of the world as it *is,* and studies concerned with how the world *ought* to be. Eisner holds that "Values should precede inquiry" and the inquiry produces facts that take on educational significance by virtue of their "instrumental relationship to educational values." (1972, p. 247) On the other hand, one must wonder how Eisner can deduce "educational significance" from an array of statistical data derived from an artificial model . . . particularly if the statistical information is largely concerned with levels of probability in a contrived event in which values are deliberately omitted.

Unfortunately, although such approaches have a lengthy tradition, both the scientific psychologist who takes a narrow view of scientific inquiry and the humanist who takes his science sourly are in error on several accounts: To begin, historically, as today, scientific concepts have never been either *enduring* or *pure* (in the absolute sense). Not a single concept has remained unchanged throughout history. And, in regard to the notion that scientific concepts are limited to observable data and artificial models, it is significant that not even Newton, who constructed a world view consisting of 'absolutes' could have created a theory of gravity based solely on the observation of an apple falling to the ground. While the idea of gravity has been with us for such a long time that we tend to think of it as part of the phenomenal world, it is actually a concept created to explain events that take place in the world. Gravity, as Bronowski noted (1972), is neither sensible to the touch, nor visible to the eye. And seemingly solid mass, Newton found greatly difficult to define in absolute terms. The concept is a symbol created to account for the similarity between separate events. They are created and tested, not according to an artificial model in the laboratory, but in relation to the behavior that the concept implies for events in the real world. If the behavior implied by the concept is not found to be verifiable, then it is corrected and verified again. This is what Newton was doing when he computed the force that holds the moon in orbit. Just as there was a concept in early Greek science that held that universal forces in space pull the moon away in a manner similar to a whirling stone pulling away from a string, Newton's concept of mass and gravity, alike in the apple and the earth and the moon, provided a corrected concept that seemed more consistent with the way in which bodies of mass behaved. In a similar manner of testing and verification, Einstein found that Newton's two concepts of mass as distinct entities were essentially aspects

of the same concept. In order to prove it Einstein constructed a theory of relativity which in turn provided a revolutionary view of the universe and life on it.

Contemporary scientists have moved in the opposite direction from Newton's principles and methods. The naive notion that the scientist is a neutral observer discovering "laws" in an observable reality apart from the observer has been found to be mistaken. In the world beyond the scientific laboratory, the artists who had been taught that mimetic principles were discoverable in the visual appearance of reality also discovered that traditional notions about art were mistaken.

What happens to the traditional notion that the "laws" of perspective are not discoverable in the appearance of things but are invented? What happens to concepts of universal laws of unity and symmetry "given" in the natural order of the universe which are found to be invented devices? The implications of the revolution in science in the late Nineteenth and early Twentieth century were not lost on artists, or poets, or writers, or composers. Just as artists of earlier epochs painted pictures or carved statues of an ideal, changeless order based on concepts of the world derived from the Greek natural sciences, just as artists painted pictures that were replicas of the humanistic reality of Renaissance science, just as artists depicted worlds within worlds as conceived by the Copernican revolution, the concept that artistic laws were not hanging about in the visual world waiting to be discovered precipitated a revolution in the arts. Monet painted pictures of haystacks and cathedrals whose forms changed with changing light. Seurat placed dots of pure color next to each other to create implied colors in the observer's eye. Cezanne was concerned with analyzing the structure of reality. Picasso, Gris, and Braque painted pictures in which the object and the space around it were inseparable. Boccioni painted the forces of motion. Duchamp painted a picture of the motion of a figure descending a stairway that owed as much to the x-ray pictures that dealt with the deeper layers of reality as it did to the theory that proposed that time and space and events in the material world were not independent entities. The tradition that the data of sense was sufficient evidence for the creation of art had outlived its usefulness . . . the artistic image, no longer a copy or reflection of the visual world, came to be seen as an invention created by the artist.

The successive revolutions in the sciences and the arts have tended to modify the underlying intuitions of man and his culture. The changes have tended towards increasing relational objectivity and open-endedness. The notion of an absolute mind grasping absolute laws in an absolute order has been replaced with concepts that carry our understanding of the universe and life on it well beyond the limitations of concrete 'sense-data.' In place of the static world in which events in the material world are distinguished from the forces that move them, in place of the concept that aspects of physical reality can be separately measured and merely accumulated in a linear progression in which specific causes and effects are predictable, the concepts of the contemporary scientist are concerned with the relationship between events and the laws that govern them. Whereas Newton thought in terms of an ideal order that was the same for everyone and "given" in a separable reality, the theory of relativity proposed that the subject/object dichotomy was an illusion; that the observer does not stand outside of the knowledge that he creates. Man not only influences everything he observes, he is responsible for his own knowledge

and behavior. Thus, the knowledge he constructs is a product of his own imagination.

In the face of historical evidence which has been documented elsewhere better than I have been able to only indicate here, the notion that scientific facts and human values adhere to separate or even opposing "realities" is a misconception. The confusion of behavior theorists, psychologists, aestheticians and art educators notwithstanding, in actual practice, in the real world outside of the psychological laboratory, there has always been a rapprochement between concepts in various disciplines. The fact is that in the sciences, in the arts, and in the culture of society generally, concepts about the nature of the world and the nature of man have always been an integral aspect of any civilization. Indeed, the interconnections between the various aspects and parts of any civilization are the manifestations of the integrity and unity that keep a civilization together as a unified whole. It is as absurd to regard the scientist as a neutral recorder of 'facts' devoid of values as it is to regard the artist as a mindless manipulator of fanciful sensory impressions apart from conceptual judgments. "What makes each human, what makes them (their concepts) universal, is the stamp of the creative mind." (Bronowski, p. 27)

In the scientific disciplines, in contemporary physics and biology, when there is a premium on definitive answers, when a particular question fails to provide access to the solution of a problem, the underlying theoretical assumptions are re-examined and replaced with new constructs or paradigms that make information accessible. What emerges from the new paradigms that have a bearing on understanding children's development in art? In biology and evolutionary studies there is the idea that the universe and life in it is definitely "monophyletic." It is, according to Delbruck, based universally on nucleic acids and proteins; it universally involves the same genetic code in which amino acids are coded by the same triplet of bases as the nucleic acids; the ribosomes and the transfer RNAs and the charging enzymes are manifestly related; the proteins in their amino acid sequences and in their folding patterns clearly display their descent from common ancestry." (1978, p. 339) The unity and continuity which are manifested in the anatomy of living organisms, right down to their molecular anatomy, is equally manifested in the psychic elements. In complex social behaviors, complex nervous systems, and complex adaptive processes, cross-model integration in the central nervous system evolve together. The concept of mind as an organization with a strong center emerging as the source of conscious, thought controlled behavior in response to adaptive pressures from external stimuli suggests that the cortex is the organ of ideation.

From the new paradigms in mathematics there is the idea that the *reality* of mathematical concepts do not constitute a separate reality. The fact that special mental abilities are required to elaborate number concepts, and the fact that such abilities are rooted in the cortex, suggests that mathematics and logic cannot be understood in terms of mathematics alone, but in terms of the wider context of the development of mind. Thus, whereas logical thinking and mathematics were once seen as either innate or learned from cues given in the environment, logic is now seen as a characteristic of thought itself.

From the paradigms in the physical sciences there is the idea that observations of the physical world are as much psychic and subjective as they are specifically objective. As Delbruck notes, "The blue of a summer sky and the 4,400A of the wave-length of its

light both refer to experiential acts, differing principally in the affective components accompanying these acts and their expression." (p. 351) The distinction between psychic and physical functions, then, is not a matter of opposing realms of reality or separable mental processes and functions, but a matter of relationships and a degree of emphasis. "Mind, the mind of the human adult, the object of so many centuries of philosophical debate, ceases to be an absolute. It is seen to be a product of adaptation in response to selection pressures, as is everything else in biology." (p. 353)

The question that now confronts us is not what are the data 'given' to sense? nor is what is "observable" logically necessary? but rather, how does the mind construct what it knows? For, just as the construction of number concepts cannot be understood in terms of mathematics and logic as "givens," neither can the creation of art be understood in terms of sensations and feelings or perception, but in terms of the wider context of consciousness and the knowing mind.

Genetic Epistemology

Piaget's Genetic Epistemology brings the understanding of the developing mind and the growth of knowledge within the paradigms of the scientific revolution. If, as Einstein has shown, conceptual judgments are always relative to the position of the observer making those judgments, then the observer can never be left out in the consideration of the construction of those concepts. In contrast to the subject/object dichotomy, the construction of concepts always involves a subjective element . . . in the sense that objective constructs are essentially projections of internalized thoughts. The 'objective' laws that the classical scientist assumed were discoverable in a reality apart from the observer, are in Piaget's view, identical with the structures of intelligence. In contrast to the traditional notion of mind as an immaterial essense, Piaget regards the developing mind as a function like any other aspect of the organism. Thus, at every level of development, knowledge is a function of an operational intelligence that is inseparable from the biological organization and adaptive processes involved in growth. His extensive studies in the development of concepts of time and space, causality, the permanent object, and number relations provide a means of understanding the interplay between maturation and experience (learning), between the innate and the learned, that contribute to development.

Genetic Epistemology is actually a new discipline with problems, methods, and a theoretical framework that are unique in the study of development from birth to adolescence. Piaget's model is based on the principle that there are laws of development, rules of formation, that characterize the growth of knowledge and are applicable to various realms of knowledge. The problems of Genetic Epistemology are concerned with identifying the mechanisms and processes involved in the evolution of conceptual structures, which, if they hold true for the individual, by extension also hold true for the species. The objective is to formulate a general theory of the genesis of systems of knowledge which demonstrate how the mind is an active participant in what it knows. To this extent, Piaget's model provides a means of looking at the various aspects and processes that influence development without losing sight of one reference system in favor of another. Rather, the emphasis is on how the different aspects are integrated in the total living process of the organism. Piaget's theory of knowledge is based on the idea that mental growth is governed by a dynamic principle, a continuous activity, aimed at balancing the pressures and demands of the

environment with the organism's need to conserve its integrity; hence, a subject-object equilibrium rather than a subject-object dichotomy.

Perhaps one of the most obvious differences between Piaget's theory of knowledge and prevailing theories concerns the relation between perception and representational thought. Rejecting the notion that conceptions of reality are either empirically given or preformed in the mind, Piaget holds that the way in which individuals organize and represent the world is mediated by internalized structures — schemata — that are constructed from interactions with the environment. Whereas other theorists attribute particular aspects of children's drawings to perceptual properties in the object, or to preformed perceptual catagories, or to affective states, Piaget holds that the drawings are reconstructions derived partly from imaginal structures and partly from relationships grasped from perceptual activities. In other words, while perception provides particular kinds of knowledge about an object, the transition from perception to representation presupposes cognitive structures without which perception itself could not function. A drawing is the representation of a mental concept that involves elaborations, combinations of relationships, comparisons and anticipations, and so forth, which cannot be attributed to perception as such.

According to Piaget, perception, even the simplest environmental stimulus, is never passively received and stored; it is always acted upon. The actions and coordinations which gradually form logical structures provide the basis for the construction of concepts of the world. The initial grasping reflex, which begins as a response to anything that touches the hand, leads to increased hand-waving and reaching, which in turn, includes reaching and grasping, and the visual perception of an object. The concept of the object begins with things that exist in the world of reaching and grasping actions which are coordinated with the visual appearance of it. The child who brings things to his mouth to be sucked is constructing a world of things to be sucked. When the actions of sucking, touching and grasping are coordinated with the action of vision, when the tactile world is coordinated with the visual world, then the notion of the object as a thing separate from actions can be formed.

The distinction between actions and things provides the basis for the formation of mental images, memory, which enable the child to plan and anticipate. In the absence of the mental image the child will play peek-a-boo and be endlessly surprised, or suck either end of a bottle. With the coordination of the sensori-motor activities and vision, the notions of a world consisting of things and actions limited to whatever can be reached and grasped, is extended to include events and objects that are not immediately perceptible. The perception of things enables the child to form mental images which provide memories of actions and objects soon after they have taken place. The child will now look for hidden objects, turn a bottle if it is presented wrong way around, and delay his cries when a parent leaves the room. By the end of the first two years, the construction of mental images leads to the notion that things have an existence separate from his own actions, i.e., the concept of object permanence.

During the next year, the construction of reality proceeds in similar patterns. With increased differentiation between mental schema and actions and objects, imitations of immediately perceived events and objects are followed by deferred imitations and the appearance of the symbolic functions. The ability to imitate things that are not immediately available and to use words or actions to evoke objects and events to signify elements that are

not perceptible at the time constitute the beginning of representational thought. In the child's first drawings beyond the scribble stage, the transition from the sensori-motor schemes and perception to the evocation of differentiated signifiers is essentially a transition from internalized imitations and actions to representational thoughts independent of perceptual actions. As in the earlier stage of sensori-motor intelligence, perceptual activities develop until they are able to be directed by operational intelligence. It is when the child can free himself from the concrete in favor of formal operations that he is able to represent volumes and spaces so that they appear in proportion to each other, relative to a plane of reference. A brief overview of the stages follows.

In an extensive study of the child's conception of space from perception to representational thought Piaget found that although sensori-motor actions and perception provide the child with knowledge of shapes of various sorts, straight lines and curved ones and notions about size, the ability to transform such knowledge in an image follows a sequence of development that seems, at certain stages, to lag behind the direct actions and perceptions.

In fact, in the early stages of the development of representational thought, the child seems to ignore sizes, projective relations, proportions and directionality, and constructs images from the spatial relations achieved during the sensori-motor stage. These begin with the simplest relations that can be grasped from perception, the topological relations that situate objects in terms of their location in a static perceptual field, and progress until notions of continuity provide the basis for conceptions of the perceptual field as a whole. Topological relations begin with proximity — nearness — and gradually extend to include such relations as separateness, which dissociates neighboring elements; order and sequence, which provide a means of segregating and classifying part/whole relations; enclosure, which gradually applies to previous relations and provides a means of generalizing to objects in a box or behind each other; and, finally, continuity, which provides a means of coordinating and organizing all the topological relations into increasingly complex wholes.

During a second stage, the spatial relations concerned with sizes — metric relations — are gradually coordinated with the constructs achieved from topological relations. The notion of projective relations also begin to make their appearance at this stage; the child draws things above or below, or behind each other as the notions of proximity, separation, enclosure, order and continuity are incorporated with notions of size and spatial direction. In the third stage, the achievements of the first two stages are extended to involve the relationship of objects relative to each other in the picture-space. The sequence of the earlier stages is quite similar and can be seen as a series of circular reactions in which the characteristics of the preceding stage are gradually integrated into the following one. Real projection, perspective relations, do not appear in children's drawings until the seventh, eighth or ninth year, and begin with relationships in which various points of view, though not necessarily coordinated, are attempted in a single picture, as if the child was attempting to see everything at once. It is a period in which some children can copy fairly accurately but seem to misplace the coordinating diagonal lines which provide the illusion of the gradually diminishing plane.

For example, up to the age of four (it should be noted that age specifications are always approximate, but

sequences follow similar patterns), a child can name various shapes such as circles, squares and triangles, but when he is asked to copy these shapes they are drawn as closed loops without straight lines, regardless of the perceptual model. Similarly, a child can accurately copy a picture of a circle within a circle, where the topological relation does not present a difficulty, while at the same age the copy of a square, which involves change of direction, is very difficult for the child to do. If the drawing were a copy or an extension of perception, acknowledging the place of the manipulative skills involved, is it likely that imitating a model would present such difficulties? It is significant that at a later stage, when straight and curved lines have been differentiated, the question of size and the question of the number of sides in a figure, such as a triangle, is only gradually attended to. By the sixth or seventh year a child can make fairly accurate copies of simple shapes and attend to all the other aspects, size, location, number of sides, as well. The question to which Piaget addresses himself in his studies is why such changes take place and what factors and elements in the developing mind account for the differences between children's drawings at various stages. In other words, it is in understanding the nature of the changes in a child's thought that an understanding of the changes in the drawings can be reached.

While some art educators would object to such conclusions based on the child's ability to copy geometric figures which the child may not be interested in at all, the developmental sequence can also be seen in spontaneous drawings that children make. In a typical drawing of a man, or person, by a three or four year old, the head is shown as a large circle to which several strokes, indicating arms and legs, are attached. The face will contain two eyes, a nose and a mouth, which may be inverted. It is clearly evident that such a drawing cannot be explained in terms of the child's perception, as such (as Arnheim attempts), or in terms of the child's conceptual knowledge, as such (as Harris does). The child seems to be drawing things that be both sees and does not see. He does not *see* legs attached to the head. He does not *see* the nose and mouth inverted. He *knows* that legs do not grow out of the head . . . he can probably even point out where the nose and mouth are, indicating that he *knows* where they belong. Why does the drawing not correspond with what he seems to know and what he perceives?

The reason, according to Piaget, is that a drawing is a representation; it is altogether different from either perception or concepts, particularly in regard to the spatial relations that are involved. "A child may see the nose above the mouth, but when he tries to conjure up these elements and is no longer really perceiving them, he is likely to reverse their order, not simply from the want of skill in drawing or lack of attention, but also and more precisely from the inadequacy of the instruments of spatial representation which are required to reconstruct the order along a vertical axis." (Piaget, 1967, p. 47) In this sense, if the drawing is seen in terms of the spatial relations, the discrepancy between the content and the placement to which they refer cannot be attributed to sense-data. While the construction makes use of sense-data, such as eyes and nose and mouth, as well as limbs, the organization of the parts and the relations between them refer to sensori-motor constructs. If the child has not yet reached the point at which he can transform these relationships into conceptual ones, then he will avail himself of the topological relations to supplement the data from perception.

Thus, drawings, like the mental images which are internalized imitations, are not simply extensions of perception, but a result of coordinations of movements, comparisons and anticipations that refer to perceptual activities rather than direct perception as such. It is not until the seventh or eighth year, depending on the child's experiences, that measurement and the mental combinations required for projective relations reach a point at which the difference between perception and representation is equal.

For theorists who attempt to reduce the drawings to perceptual properties either in the object or in the mind, the difference between perception and representation has been a major area of conflict. The problem is rendered even more difficult by a conceptual framework that tends to measure isolated traits and skills in terms of a statistical norm in a selected population. The problem becomes a paradox when the qualitative attributes are separated out and art teachers aim for teaching the child not to make 'stereotypical' drawings without understanding or even questioning what factors in development give rise to such drawings, or why they change.

The advantage of Piaget's epistemological model is that he has dealt with children's development in terms of the wider context of consciousness, the development of the knowing mind, which is after all what art is about. Instead of a variety of limited range theories, each referring to a particular aspect or motivation or qualitative function, but not generalizable to the dynamic processes involved in the creation of art, the epistemological model views development as a series of transformations in thought. It seems to me that the conflicts and controversies regarding the nature of art in the last 300 years tended to hinge on the evaluative or ideal aspects that appeared to be the most obvious and therefore the central issues. The difficulty in approaching art in terms of its attributes is that it tends to obscure the mental processes and operations that perform the transformation from experiences in the real world to the created image. The lesson to be learned from the dilemmas and paradoxes of the past is that it is not enough to catalog bit by bit either the attributes of the work or the traits and skills of the artist; rather, we must look to understand the nature of the creative process in the wider context of the knowing mind and changing modes of thought.

References

Barnes, H. E. *An Intellectual and Cultural History of the Western World.* New York: Dover, 1965.

Bronowski, J. *Science and Human Values.* New York: Harper & Row, 1972.

Cassirer, E. *An Essay on Man.* New York: Bantam Books, 1970.

Delbruck, M. Mind from matter? *The American Scholar,* Summer, 1978, 339-353.

Dember, W. N. and Jenkins, J. J. *General Psychology; Modeling Behavior and Experience.* Englewood Cliffs, N.J.: Prentice-Hall, 1970.

Eisner, E. *Educating Artistic Vision.* New York: Macmillan, 1972.

Langer, S. *Feeling and Form.* New York: Charles Scribner, 1953.

Piaget, J. *Six Psychological Studies.* New York: Random House, 1968.

Piaget, J. and Inhelder, B. *The Child's Conception of Space.* New York: Norton, 1967.

Zweig, A. *The Essential Kant.* New York: The New American Library, 1970.

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TOWARD AN ART EDUCATION THEORY ON QUALITATIVE RESPONDING TO ART

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Ground-work Toward a Theory of Responding to Art

Although thought and theory about responding need not place any judgments on art to those engaged in teaching it, the suspicion remains, crudely put, that "making" *has* it, "talking *about*" doesn't. What lurks in this commonsense prejudice, widely shared by teachers and students alike? If we try to "unpack" this prejudice, a number of possible reasons for it emerge. Actions, in making, are marked by intentionality, drive, impulsion, blocks and their surmounting, tangible and often irreversible intercourse with the environment, choices and branchings, the aliveness of emergent and unpredictable spontaneity, and, in short, evidence of what Hausman (1975) has called a "discontinuously developmental teleological process." But, the astute reader will ask, why cannot these same terms be applied to responding? Of course they can, and from the point of view here developing, they should be. The reasons why they are not we are at this point trying to clear away.

Chief among the reasons to be examined are those hinted at in the words "talk *about*" and in the vaguely defined "unit character" of responding. "Making" has both course and destination. As with a naive story, it has a clear beginning, middle, and end. The drawing or pot gets made, and the cycle of making rounds out thereby. We accept, without probing it, that making is qualitative. If we say of an art object that it has no life, we assume that the artist was not "alive" in its making. It cannot then easily become an *art work* for us, for we feel little or no artistry-at-work, no creative-in-dwelling, no spontaneity or surprises in its making. Words like overworked, underdeveloped, trite, academic, and the like have common interpersonal references and meanings as applied to art objects. In short, we expect quality, creativeness, spontaneity, and imagination when we think of "making art." That there is an abstract normative judgment involved is also implied when we say of the object (and through it, say of the making) that it should have stopped sooner, or has unrealized or dead spaces, or should have been further developed along a certain line, or, indeed, imply that anything could be added or taken away.

The "unit character" to which the above terms refer is that fused consummatory and instrumental quality which arises from making that has organically run its course, thereby unifying its surprises, resistances, accidents, and the like. That this is a one-of-a-kind unit or unity is further to the point, for it becomes nothing short of miraculous that we agree quite well on especially negative instances of such unique contextually-bound qualities.

At this point in this essay, I want to suggest that it is, simply put, the spread and fusion of the *qualitative immediate present* which constitutes the unit character of both making and responding. "Sensuous immediacy" has long been advanced as a distinguishing property of the aesthetic, but its full meaning has not been pushed

far enough. Centered in the qualitative immediate present we are also centered in the "life-world" and in the "live-creature." As human beings we are not then seen historically (although our historicality is central), nor scientifically (although our conceptual powers are fully there). Both views, the historical and the scientific, leave us without even the razor's edge between past and future to stand on qualitatively, in fullness of being. "Poetically," indeed, as Heidegger (1971) muses off of a poem of Holderlin's, "man dwells on this earth."

Even history and science must come to grips with "evidence" and "reality" within the qualitative immediate present. But they do so with supreme disregard to the qualitative aspect of the "present" in their instrumental search for the conceptually "real." Only poetry and art, love and dialogue, satori and ecstasy, can "thicken out" the immediate present so that the deepest meanings of which we are capable can be *qualitatively felt.* This misnamed "specious present" then becomes the "spacious present."

In passing, I am not discounting the "second order passion" (as I will call it) properly attending our conceptualizations about the real, within history and science. It is even possible, as Capra (1976) has indicated, in his book *The Tao of Physics,* that at their furthest reaches, starting, respectively, from the smallest and the largest "facts" of experience, physics and Eastern mysticism may end up with a similar qualitative and metaphorical grasp of the universe. I would follow Gendlin (1962), however, in his reference to the difference between what he calls "parallel" and "nonparallel" symbolic relationships between symbols and experience. In the former, symbols refer directly to "felt meaning," whereas in the latter, by a method he calls "circumlocution," we experience felt meanings of a second order arising from the symbols and their relationships to each other (as well as to their possible connections with a more personally identifiable experiential base). Collingwood (1938), likewise, develops the concept of second order imaginative work of the intellect. A scientific prejudice and snobbism can be teased out on this very score. Its clearest expression occurs in Pavlov who talked about a "first and second signal system." The latter refers to the intellectual, conceptual, discursive use of symbols. Artists' minds were thought by him to be underdeveloped if not deficient because they were fixated mostly at the qualitative level. In direct contrast to this view is that of Pepper (1966), who centers on the qualitative immediate present as actuality itself, even when in the service of history and science in their pursuit of abstract, conceptual reality. Almost alone, the artist and poet make the qualitative immediate present part of our conscious awareness. Pepper uses Keats' "Ode to a Nightingale" to exemplify how the quality of present immediacy can thicken up and rupture the hold conceptualized and linear time has on our representations of our world. In Dewey's description (1934) of "an experience" we see how this qualitatively thickened up character of the immediate present can be extended within qualitative, or kairotic, time, so that the combined consummatory and instrumental nature of a long series of acts can itself extend and fuse into one qualitatively extended immediate present. Not that there are not gaps and breaks in the series, nor is this to deny that the whole experience, as in making art, is not an organization of many qualitative immediate presents, but that their fusion maintains across the breaks and resistances the integrity and coherence of which all the parts are but meaningful fragments.

For our purposes here, it is sufficient to refer to the fact that the immediate

present is not a fiction nor a concept, but an actuality even within "clock time." It is a "duration block," as James (1918) called it, and such "duration blocks" in succession give continuity to consciousness, he says, so that it deserves to be called a "stream." In his words: "The knowledge of some other part of the stream, past or future, near or remote, is always mixed in with our knowledge of the present thing." As with Langer's analysis of the act form (for which she takes the making of art as a metaphor, as "a whole held together only by activity"), in which act forms rise like waves one from the other, so, says James, does consciousness itself work:

> If the present thought is of ABCDEFG, the next one will be of BCDEFGH, and the one after that of CDEFGHI — the lingerings of the past dropping successively away, and the incomings of the future making up the loss. These lingerings of old objects, these incomings of new, are the germs of memory and expectation; the retrospective and the prospective sense of time. (James, pp. 609-610)

As to the unit character of making and of responding seen in the light of "an experience" in Dewey's sense, it may seem glib, but it is nonetheless true, that *the event is over when it is over;* that is, when the successive patterns referred to by James part company from a former anchorage in a consummatory and instrumental streaming organization of acts of the live creature. This is why we "dwell poetically," for in so doing we draw out the qualitative immediate present so that we may in-habit it.

Just as there are no extraneous unintegrated actions in the unit character of making, so there can be none in responding. The commonsense withdrawal from "talk *about* art," merely points to the non-existence of a meaningful unit called responding in the one so withdrawing, and the removal from what is meaningless is actually then a healthy sign. But then we come back to the fact that the symbols used are neither meaningful circumlocutions nor metaphors in touch with the respondent's experience. So the error is not in talk, as such, nor in the most abstract symbols that might be used in various kinds of discourse, but in their being imported into a present of which they are not a meaningful part.

I would then have to argue that, just as in the study of making drawings the drawing first had to be given back to the artist, so if I were to study meaningfully the unit character of responding, the response would have to be given back to the respondent. In no other place could the talk qualitatively, actually, arise. We would then need the equivalent to the three preconditions I proposed (Beittel, 1973) as necessary for the presence of art: (a) artistic autonomy, (b) idiosyncratic meaning, and (c) intentional symbolization. Further, to study a serial of units of responding I would have to likewise point to the necessity for (a) closeness to the responding stream of consciousness, (b) by means of a special participant observer's role. Since the above concepts are developed elsewhere, I will not detail them here, but merely indicate how they, or similar concepts, would be necessary for authentic and fruitful inquiry into responding to art. As in the in-depth studies I have done into drawing, the researcher would be a co-sharer, co-creator, co-responder. The researcher's self-reflection and reflexivity would be a natural part of the descriptive task, for as present in the event which is being described, the researcher would produce a special kind of historical narrative. Also, as in the drawing lab, a special kind of community would be established in which dialogue is central: the active dialogue of each rounded unit of art-responding, and the active dialogue between researcher and art respon-

dent. In these, hermeneutic phenomenology and, in particular, the phenomenology of dialogue (as proposed, for example, by Ott, 1967) would take a central role.

Let us return to "talk *about* art" and the pejorative connotation this phrase usually carries. Pepper (1966) gives us a clue to the grasp of the qualitative immediacy of the present when he turns to Keats' "Ode to a Nightingale" which reports poetically a period of reverie in a friend's garden one evening while hearing the nightingale's song. After quoting the poem at length, he says:

> It was such a rare experience that Keats wished to *communicate* it to others, or at least he wished to express it, and did it so well that a communication takes place. But anyway for exemplifying the way time exhibits itself in immediacy, there it is. Read these lines and observe what Keats is reporting, and observe also the experience you find going on in you from the reading. You will not find a widthless boundary with a past on one side and a future on the other, the past supposedly having ceased being present, and the future not yet having acquired the present. (Pepper, p. 358)

Instead, one will find that "thickening up," that dwelling within the qualitative, that "dwelling poetically" of which I have already spoken.

We thus move closer to Richards' (1955) hope for a method which studies the poetic and the emotive with the poetic and the emotive, without doing injustice to either the poetic or cognitive uses of language. It would appear then, and this is a key point, that a *phenomenology of the qualitative immediate present would have to dwell within the qualitative immediate present,* and that the best model for so doing would be no method at all, but the expressive-commemorative-consummatory-instrumental language of poetry and literature itself.

Gendlin (1962) shows the exponentially exfoliating effect of a simple metaphor, creatively forged as a symbol to bring one's experience to the level of meaning. In the poet's simple "my love is like a red, red rose," we have a plenum of meanings endlessly available. As Gendlin indicates, if we try to draw a line, for example, if we say, "Well, the rose is rooted in earth, and my love is not," we no sooner make this utterance than we proceed to fill in that meaning of how one's love is rooted and grounded. In fact, in the ambience of a powerful metaphor, nothing can be said on the one side that will not creatively extend the other.

I am tempted to say that the qualitative duration of the immediate present can only be qualitatively extended. This thought brings me to the revelations of the deep structure of language in the generating warmth of the qualitatively extended immediate present. Layers upon layers of meaning burst forth, from "love-rose" to the universe itself as it can be grasped and telescoped within deep of memorable experience in immediate actuality. In the example taken from Keat's "Ode to a Nightingale," we have admixtures of descriptions, smells, sounds, the movement of the bird and its spatial song, mention of things not seen as well as of those seen, along with the extension produced by the lines "Was it a vision or a waking dream?/Fled is that music — Do I wake or sleep?" So ends the poem, with the layers upon layers suggested, even as it suggestively began with "I cannot see what flowers are at my feet."

To qualitatively extend the quality of the immediate present in responding, one must feel one's feelings with words; one must, that is, dwell poetically. Interestingly enough, the examples we have from literature are quite often centered upon an extremely memorable natural phenomenon, aesthetically moving, as in the song of the nightingale for Keats. Like examples

abound in novels. In Proust's great novel, many passages have this quality. In *Within a Budding Grove* (1924), for example, Proust devotes four pages of print to the feelings invoked in the narrator by the sight of three trees which suddenly appear as he is on a carriage ride through the French countryside with Madame de Villeparisis. The clock-time interval encompassed by this segment of the journey moves forward inexorably, but the drama unfolding for the narrator is an inner one, in which the qualitative duration of that scene now coming into view, now central, now turning and disappearing as the carriage moves on, clashes violently with the run-away-clock-time that echoes the horses hooves. Let us sample from his narrative:

> I looked at the three trees; I could see them plainly, but my mind felt that they were concealing something which it had not grasped, as when things are placed out of our reach, so that our fingers, stretched out at arm's-length, can only touch for a moment their outer surface, and can take hold of nothing. Then we rest for a little while before thrusting out our arm with refreshed vigour, and trying to reach an inch or two farther. (Proust, p. 20)

Although another paragraph follows this extended one from which I have sampled, I chose to stop here, for this one paragraph has in itself the many-layered texture of an intensely moving qualitative immediate present. In it six times Proust raises the question, as though from his own successively streaming and searching consciousness, what the import of the event might be: what was to be symbolized by the felt meaning occasioned by the sight of the three trees? After searching through the six alternatives, his own pervasive orientation, sustained throughout all the volumes of his novel, breaks through, as he says:

> I *chose* rather to believe that they were phantoms of the past, dear companions of my childhood, vanished friends who recalled our common memories. (Present writer's emphasis)

Buber (1970) in an example from *I and Thou,* strikingly shows the distinction between responses which do and do not qualitatively extend the qualitative immediate present. After sorting through the various ways he can consider a tree which is perceptually present for him, all of which render it his object, he says:

> But it can also happen, if will and grace are joined, that as I contemplate the tree I am drawn into a relation, and the tree ceases to be an It. The power of exclusiveness has seized me.
>
> This does not require me to forego any of the modes of contemplation. There is nothing that I must not see in order to see, and there is no knowledge that I must forget. Rather is everything, picture and movement, species and instances, law and number included and inseparably fused. Whatever belongs to the tree is included: its form and its mechanics, its color and its chemistry, its conversation with the elements and its conversation with the stars — all this in its entirety. The tree is no impression, no play of my imagination, no aspect of a mood; it confronts me bodily and has to deal with me as I must deal with it — only differently. One should not try to dilute the meaning of the relation: relation is reciprocity. (Buber, 1970, p. 58)

In this passage the transactional encounter and relationship which is dialogue is delineated. "Exclusiveness" and "reciprocity" are keys to the nature of this dialogue. And dialogue is always "about" something other than the dialogue partners themselves. In the light of making art or responding to art, I would like to suggest that the aim of the "subject matter" of these, as dialogues, is indeed the qualitative extension of the qualitative immediate present itself — that which draws out the "exclusiveness" and "reciprocity" which are the hallmarks of such dialogue. It is this which makes it more

than a metaphor to say that the stone "carves" the sculptor, or that the painting "speaks" to the one responding to it.

In responding to painting, however, it would seem possible to qualitatively extend the duration of one's immediate present in relation to the painting through the use of "grayer language." Foucault (1971) does just this throughout 14 pages of type as he patiently describes Velasquez's "Las Meninas." After six pages of phenomenological description of the painting, he begins anew. Whereas before he talked about what appeared in general terms, in his new start he pins down the proper names of the figures represented. Then he muses:

> These proper names would form useful landmarks and avoid ambiguous designations; they would tell us in any case what the painter is looking at, and the majority of the characters in the picture along with him. But the relation of language to painting is an infinite relation. It is not that words are imperfect, or that, when confronted by the visible, they prove insuperably inadequate. Neither can be reduced to the other's terms; it is in vain that we say what we see; what we see never resides in what we say. And it is in vain that we attempt to show, by the use of images, metaphors, or similes, what we are saying; the space where they achieve their splendour is not that deployed by our eyes but that defined by the sequential elements of syntax. And the proper name, in this particular context, is merely an artifice: it gives us a finger to point with, in other words, to pass surreptitiously from the space where one speaks to the space where one looks; in other words, to fold over the other as though they were equivalents. But if one wishes to keep the relation of language to vision open, if one wishes to treat their incompatibility as a starting-point for speech instead of as an obstacle to be avoided, so as to stay as close as possible to both, then one must erase those proper names, and preserve the infinity of the task. It is perhaps through the medium of this grey, anonymous language, always over-meticulous and repetitive because too broad, that the painting may, little by little, release its illuminations. (Foucault, 1971, pp. 8-9)

Finally, after pages of this "grey, anonymous language" on its many-layered phenomenological mission, we come to what has held this description of a painting together qualitatively for Foucault: the painting is taken as a symbol for "representation in its pure form." Thus, as held together qualitatively in the immediate present of the phenomenologist experiencing it, the phenomenology becomes of necessity hermeneutic phenomenology, for the being of the phenomenologist cannot be bracketed without the collapse of the successive immediate presents qualitatively bound together in that description.

This last example, then, extends our frame of reference from the faster burning poetic, lyrical and metaphorical respondings to those which are more meditative and more philosophical. To my taste, the Foucault example is less attractive and less convincing. But perhaps it is also less confusing. I felt the need of it to round out my examples and keep responding open.

I would like to give one more example, in this case by a student attending a graduate seminar. His spontaneous qualitative response expresses something of the confused approach-avoidance state of a student catching the excitement but only glimpses of meanings of a new language:

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>
> metaphysical calibration sphericallity contankerous hermitology come on out here into the sky we'll walk on a wire of sylph a mere cobweb of a mudslide. . . . paranoia, they have it all planned, they play it so well richard will say some interpolative schmeer about didactic presentation of phenom. . . . like a dubiously supportable earmuff and rachel agrees with an oblique qualifi-

cation or two and b says about paucity supportable and makes me laugh though i don't know what at, just the relief. larry's working in some spherocity, the little steps make it up but overriding is . . . dave makes them clarify and b burns a few brackets and makes me laugh . . . so what has been given . . . decided upon . . . nothing can be . . . maybe that's the health of it. and they won't bat a flinch . . . i nearly get a glimpse of a phrase but my pen's too slow it comes out in the notes like partic leads to the world, must delimit. . . . () and i think . . . these actors, they play it so well it's all a sham they're setting me up and studying the reaction, how far can we push him . . . they're very creative with this drama . . . a flexi-drama free form they create it all along the way here we are in this night building after our job-day while elsewhere on the planet others are sleeping or running skiffs between the waves or thinking of cabbages, some are drawing or polishing shoes at this hour. i used to pinch goonies all night, now I come to participate and bearly witness. and the one guy, he even has these books which he's somehow slipped into the public bookstore . . . , no questions asked. they play it on and i sometimes see so clearly that it's going to fall apart any second and it'll all be revealed, yes it was a theatre piece, you should have trusted your intuition . . . but then they slide right through with a couple thoughts that i nearly understand or remember or feel, their fast feel even in golashes and i concentrate real hard and forget about making it fit my set and safer ways of thinking about these things, such things as creating, arting, reaching, hoping, and i remember that the reading 100 pages that i did some of twice made sense on some level, a felt level a qualitative thing? that i can't explain because i don't have the vocabulary, nay, the thinking, the same thing? richard, as he's leaving says it'll come in time, it's like cycles of the moon. i go home thinking about that . . . we gain the vocab., the ways of thinking over a period of time but then it puts us in a place where it starts over again on another level, or maybe we just gather this stuff about us and bark at it once a month. i can't walk away. i wish too to go out to that risky place the cobweb among mudslides i don't know why i guess that's why i go there. (John Ziegler, 1978)

By way of summarizing, I have tried to present the unit character of responding to art (or to responding aesthetically and qualitatively to any aspect of experiencing), as a mode of being which, ontologically, fuses qualitative immediate presents into an aesthetic whole. In short, this argument would lead toward a "progressive organicism" in which the pregnant fragments of each qualitative immediate present are fused and integrated into such an aesthetic whole (or responding falls apart, losing unit character, becomes boring, academic, wandering, pedantic, and the like). In terms of language, a reflexivity is implied (Gendlin, 1962, p. 201), in which there is an "identity between what is asserted and one's procedure in asserting it." Again, ontologically considered, the purpose of the unit of responding comes forward as that of extending, in a consummatory way, qualitative immediate presents. As long as such a creating-in-responding attitude persists, there should be no problem in talk *about* art, for its base is firmly rooted in felt meaning. Words are not the basic meaning, since the "this" which the painting means is within visual experiencing, *but* words are ideal for extending the specifications of that "this," and in so doing, especially under metaphor, can open up myriad possibilities as well as harmonize reflexively with their nonverbal base. As Gendlin further indicates, concepts are not the problem, because, properly understood, concepts do not apply to experiencing; rather they are the end product of conceptualizing that experiencing.

By making the unit character of extended qualitative immediate presents the end of responding to art, I do not want to set responding off as Sunday-sacred or esoteric. It is the daily bread

of common experiencing as it intensifies in the emotionally invested commerce we have, potentially, in all objective situations. Just as a common cup, in the making, to the sensitive potter is as much a context for the qualitative and even the divine as is a ceremonial jar for a king, so can any occasion serve as the subject matter for the string of transcendent transformations I have termed the unit character of extended qualitative immediate presents.

As in creating, so in responding, there is no "correct" response, just as there is no "correct" expression — only the coming to wholeness implied by the organic fusion of qualitative immediate presents into one consummatory experience. If that is present in the acts of such a whole, it should also be potentially present to another. A principle of relativity is thus always at work, so that no identity between views is possible. With full participation and willful consciousness of the necessity for reflexivity on our part, we can dwell with the one authentically responding just as we can dwell with the one authentically creating. The phenomenology of such a dialogue will then be revealed for what it is: hermeneutic phenomenology of dialogue concerning authentic responding to art.

References

Beittel, K. R. Qualitative description of the qualitative. In *Phenomenological description: potential for art education research. Presentations on Art Education Research,* **2,** 1978; Concordia University, Montreal.

Buber, M. *I and thou.* New York: Charles Scribner's, 1970.

Capra, F. *The tao of physics.* Boulder, Colorado: Shambhala Publications, 1976.

Collingwood, R. G. *The principles of art* (reprint ed.). New York: Oxford University Press, Galaxy Books, 1958.

Foucault, M. *The order of things: an archeology of the human sciences.* New York: Pantheon Books, 1971.

Gendlin, E. T. *Experiencing and the creation of meaning.* Glencoe, Illinois: The Free Press, 1962.

Hausman, C. R. *A discourse on novelty and creation.* Netherlands: Martinus Nijhoff, 1975.

Heidegger, M. *Poetry, language, thought.* New York: Harper & Row, 1971.

James, W. *The principles of psychology.* New York: Henry Holt & Co., 1918.

Ott, H. Hermeneutics and personhood. In Harper, S. R. & Miller, D. L. (Eds.), *Interpretation: the poetry of meaning.* New York: Harcourt, Brace & World, 1967.

Pepper, S. C. *Concept and quality.* La Salle, Illinois: Open Court, 1966.

Proust, M. *Within a budding grove.* New York: The Modern Library (copyright 1924, by Thomas Seltzer).

Richards, I. A. *Speculative instruments.* Chicago: The University of Chicago Press, 1955.

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BOOK REVIEW:
WHY CHILDREN DRAW THE WAY THEY DO

Children Drawing by Jaqueline Goodnow,
Harvard University Press, 1977

Review

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In her opening statement Jaqueline Goodnow tells us that *Children Drawing* represents her views on a variety of representational activities, all of which are subsumed under the term drawing: drawing patterns and figures, copying geometric forms, writing letters, drawing maps, and translating a series of sounds into a graphic statement. The author freely acknowledges that hers is a *selective* account, primarily based on her own work, and that her aim is nothing less than the discovery of general principles which underlie both learning and thinking, and which are applicable across widely different domains of graphic activity. In the author's words: "Drawings can tell us something not only about children but also about the nature of thought and problem-solving among both children and adults." She hopes to shed new light on the meaning of child art by pursuing three avenues: an analysis of graphic patterns and their component parts, a description of serial order or sequences which determine the drawing of parts, and an inquiry into the use of equivalences or the application of translation rules.

In order to better understand why children's drawings look the way they do, Goodnow suggests a closer examination of the units which make up the graphic patterns, which ones are selected and how they are combined. She describes the patterns in terms of decisions that have to be made and, once made, lead to distinct consequences which rule out alternative ways of depiction. The principles she singles out are: a search for order and balance, the effect of practiced forms and preferred shapes, the separation of boundaries, the role of embracing lines, and the avoidance of overlapping forms. This list reflects, in part, formulations derived from Rudolf Arnheim and Rhoda Kellogg, supplemented by her own insights gained from a series of completion drawings.

Goodnow seems to suggest that the child is faced with a serious production problem and that his explorations lead to temporary solutions which in turn create new problems for him and for the viewer. The illustrations for this section are charming and compelling, although one might wish for greater conceptual and stylistic clarity of the text and, perhaps, for a more straightforward report of the studies and their findings. Her approach is both descriptive and interpretive and is marked by its consistent appeal to rules that guide the child's work. We are told what children sometimes do: they omit or include a feature, reorder placement and orientation of parts, play with graphics, and problem-solve. It is difficult to predict which solutions a child will adopt. The author does not offer a comprehensive account of the problems of patterning, of the reasons for inclusions or omissions, of the need for economy, and of the difficulty of spatial ordering. There is no reference to the child's conception of blank, open, and nondelineated spaces, and the account of the determinants

of the organization and placement of parts or units is incomplete.

The problem of production is once more taken up in the chapter on sequence in children's drawings. Does the sequence in which the parts of a figure are drawn affect its looks? Goodnow describes several sequences which she observed when children depicted the limbs, for example, paired versus radial sequences. This section is one of the nicest in the book, documenting the effects of different sequences on children's drawings. The reader recognizes that an important question has been raised and only regrets that the answers are not more fully explored: what is the role of age, the source of individual differences, the effect of practice and, above all, the graphic meaning of a part and its relation to the total figure? The author also makes brief mention of other types of serial order: the top-to-bottom order along a vertical axis and the child's tendency to impose a consistency along this axis from earlier to later drawn units. Altogether, this chapter is the most appealing one and its presentation is clear and readable.

On the assumption that all forms of drawing, copying, and writing require similar skills and practice, Goodnow next presents some findings of motor paths taken when copying. She describes preferred starting points and directions for line patterns. Consistent sequences indicate that these actions are rule-governed but also subject to cultural determinants; for example, writing conventions which may proceed from right to left or vice versa. Accurate copying is once again tied to types of line and sequence. A continuous line may lead to errors of shape, a kind of premature closure effect, while the use of separate lines leads to more accurate copying of forms. Additional determinants are a function of the child's perception of the goodness of the shape which, in younger children, may lead to up-down inversions. This chapter also offers advice to educators and suggests strategies to be pursued or to be avoided.

The chapters on the invention of equivalences necessary to translate visual, motor, and auditory experiences from one domain into another deal with a wide range of activities: map-making and map-reading, the graphic representation of sound and rhythm, graphic perspective taking, and the portrayal of motion. The author suggests fundamental similarities in the processes by which children create equivalences. These similarities are a preference for simple and economical forms, and a conservative tendency which militates against radical changes and fosters a more gradual and incremental modification of graphic formulas. The similarity rests above all on "visible thinking," thinking which is characteristic of all perceptual and graphic activity.

The chapters are tied together by the author's conviction that her search for common principles that unite the domains of perception, representation, reproduction, reasoning, and even feeling has been successful. Let us examine the evidence. The desire to cut across domains requires a conceptual as well as an empirical effort to define what is unique and specific about a domain as well as what this domain may have in common with others. Both orientations are essential for an adequate clarification of the demands of a task, its potential range of definitions, production problems, and cognitive abilities. Lumping together rather than clarifying the differences between drawing figures, copying designs, writing letters, and mapping sounds onto paper ignores the very different task-demands that both children and adults have to meet. To mention but a few of the most obvious differences: drawing figures presents the child with a tremendous problem of translation, namely, conveying a three-dimensional object onto a two-dimensional surface with linear means that have no counter-

part in his real world. The task of copying simple geometric forms specifies different demands: there is a model that requires matching on the part of the child and there are appropriate tools to attempt such a match. Although the youngster may have difficulty accomplishing this perceptual-motor task, he usually knows whether he has succeeded or failed, and he can recognize deviations from the model as simple recognition and matching procedures will indicate.

No such specifications are provided for figural drawing. The child has to define what forms to use, how many subunits to create, how to link them, how to orient them, how large or how small to draw the parts, and many more such decisions. Thus, there are essential differences between the domains of representation and of copying which involve dimensionality, the problem of models, the issue of prescribed forms versus freely invented ones and, above all, the problem of meaning. Goodnow largely ignores the issue of the meaning of the forms or patterns — whether the figure looks like the object the child intends to draw, whether he is aware that he has created equivalences, and what they mean to the child.

The child's quest for graphic meaning as well as the accuracy and path selection required in the copying task need to be explored. Meaning is the central issue for figural drawing and all others — equivalences, sequences, and patterns — follow from it and gain clarity within its context. A simple example may demonstrate this point. In the chapter on sequences Goodnow explores various formulas for the inclusion of the limbs. Formulas may include the serial order of drawing limbs in pairs, for example, first left arm, then right arm; next left leg, then right leg or follow a radial principle of right leg, left leg, left arm, right arm. In either case a "formal" principle or a mechanical routine is evoked and presumably accounts for the depiction of parts. What is forgotten, however, is that the child apparently intends to endow his figure with arms and legs and, quite independent of the sequence he has adopted, the picture must display certain graphic attributes in order to be acceptable to the child. It is a rare case that a child draws a single arm or a single leg, and the reason in these cases has little to do with pair formation or well-practiced routines.

Thus, the conceptual organization of the chapters remains rather loose and imcomplete. In terms of clarity of presentation, the first chapter in particular leaves much to be desired. Goodnow makes many references to authors and subjects not directly linked to the theme of children's drawings. For the naive reader who is not well versed in psychology, these unsubstantiated references make this chapter rather confusing. The student of child art finds these references irritating, for connections are merely suggested and never spelled out. In a slightly different manner this problem continues in chapter two. Brief references are made to Rudolf Arnheim and Rhoda Kellogg and a lesser known writer, Drora Booth. Again, the uninformed reader cannot possibly grasp the contribution of these theorists, while the informed reader feels discomfort at the cavalier treatment of their respective ideas. A similarly arbitrary treatment recurs in the citation of sources. Thus, for example, Henry Schaefer-Simmern who offered one of the earliest and best accounts of the developmental significance of the separation of forms and the avoidance of overlap, has not been mentioned. No reference is made to the provocative work of Phyllis Berman on the copying of simple geometric forms, to Tom Trabasso's work on the representation of spatial order, or to Susanna Millar's work on equivalence formation as translation rule. The reader is taken on a highly personal, somewhat idiosyncratic journey which suffers from omissions on the

one hand and excesses on the other. The latter can be seen in the spurious connections and farfetched analogies which the author tends to make. Thus, for example, the young child's tendency to avoid form-overlap is somehow likened to Lewin's concept of boundary and to Argyle's notion of interpersonal space.

However, despite the many shortcomings of *Children Drawing,* the book makes a contribution to the literature on child development. It provides an account of Goodnow's own innovative studies and stimulates the formulation of researchable ideas. The child's groping search for solutions has been nicely illustrated. The child's ingenious inventions and the pleasure he seems to derive from his graphic adventures support the author's contention that his solutions are rule-governed and orderly, the mark of a creative intelligence. This book, then, belongs to the series designed to explicate the implicit logic which guides the child's discovery of his world.

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THE EFFECTS OF ADVANCE AND NONORGANIZERS WITH RESTRICTED AND UNRESTRICTED MODES FOR EIGHTH-GRADE STUDENTS AT THREE COGNITIVE LEVELS OF LEARNING AND RETENTION USING SELECTED MATERIALS IN THE ARTS

Brian Patrick Ewing, Ed.D.
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Abstract

This study was an experimental investigation comparing the effects of advance and nonorganizers in the learning and retention of meaningful verbal materials in the Arts for *separate* knowledge, comprehension, and application scores, and for these scores *combined*. The effects of restricted and unrestricted modes were also examined. The theoretical base for the study is David P. Ausubel's theory of advance organizers and their application to meaningful verbal learning and retention. Ausubel hypothesizes that such organizers facilitate learning and retention of meaningful verbal materials because they permit students to subsume new materials into their preexisting cognitive structures rather than to rely on rote memory of materials in an unrelated fashion.

The sample was 80 eighth-grade students selected at random from the population of a small-town middle school. Subjects were placed randomly into four treatment groups: one group was given limited access (restricted mode) to the advance organizer, while another group was given limited access (restricted mode) to the nonorganizer. These groups were then given the actual learning passage. This procedure enabled differences to be determined between effects of advance and nonorganizers in the *restricted* mode for learning and retention. Ss were permitted to read the appropriate passage (advance or nonorganizer) 48 hours before, and immediately before reading a learning passage of approximately 3,000 words dealing with "The Art of Movie Making." These two groups did not have access to their respective preliminary passage during the study of the longer learning passage.

A third group was given extended access (unrestricted mode) to the advance organizer passage, while a final group was given extended access (unrestricted mode) to the nonorganizer passage. These groups were then given the actual learning passage. This procedure enabled differences to be determined between effects of advance and nonorganizers in the *unrestricted* mode for learning and retention. Ss in these latter groups were permitted to read the appropriate passage (advance or nonorganizer) 48 hours before, and immediately before reading the learning passage of approximately 3,000 words, "The Art of Movie Making." Ss in these *unrestricted* groups, in addition, were permitted to refer to their respective preliminary passage as often as they wished while studying the 3,000-word learning passage.

All groups were given a 24 item multiple choice criterion test weighted evenly for knowledge, comprehension, and application-level questions. A retention test was administered two weeks later. Data were analyzed for both learning and retention.

From the results of the study, it was concluded that an advance organizer (as defined in the study) did significantly facilitate learning and retention for the *combined* knowledge, comprehension, and application scores in the *restricted* mode. This finding was sup-

ported for learning in the *unrestricted* mode as well, but not for retention. Regarding *separate* cognitive levels, advance organizers did not facilitate *learning* significantly, but at the *application* level for *retention,* advance organizers in the restricted mode were significantly effective. Thus, support was found for Ausubel's theory of meaningful verbal learning and retention.

Related results included the finding that advance organizers were significantly more effective for learning and retention at some cognitive levels among girl subjects; whereas, no significant differences were noted by treatments for boys. Finally, age of subjects was not a significant variable in the study.

Review

Elizabeth C. Clarke
Syracuse University

Statement of the Problem

The experimental problem of this dissertation was clearly and precisely stated. It was "to determine the effects of advance and nonorganizers with restricted and unrestricted modes for eighth grade students in the learning and retention of meaningful verbal materials in the Arts." The author's expressed purpose in carrying out the experiment was first to participate in and extend the empirical testing of Ausubel's theory of cognitive learning, and second to include meaningful verbal materials on the Arts among those subject areas already used to test Ausubel's theory (Ausuel, 1963). Consistent with his second purpose, the author selected the first three categories of Bloom's Taxonomy for the Cognitive Domain as the descriptors for levels in the multi-level criterion test developed to measure learning and retention of the experimental materials.

The questions Ewing posed and later restated in the form of null hypotheses were: (a) Is the unrestricted mode (untimed) more effective than the restricted mode (timed) of advance organizer in the facilitation of meaningful verbal learning and retention of materials dealing with "The Art of Movie Making"? (b) Is either mode of advance organizer more effective than either mode of nonorganizer in the facilitation of meaningful verbal learning and retention with respect to mean scores for separate levels of questions dealing with "The Art of Movie Making"? (c) Is either mode of advance organizer more effective than either mode of nonorganizer in the facilitation of meaningful verbal learning and retention with respect to combined mean scores for questions dealing with "The Art of Movie Making"? (d) Is either mode of advance of nonorganizer more effective for boys or girls in the facilitation of meaningful verbal learning and retention of materials dealing with "The Art of Movie Making"? and (e) Is age of subjects a significant variable in treatment groups?

Perhaps the validation of Ausubel's learning theory may not intensely interest some art educators, but Ewing's conceptualization of learning Art as meaningful verbal learning that can be categorized and tested according to Bloom's Cognitive rather than Affective Domain will interest a growing number of art educators and policy makers. Ewing's research reflects a growing interest among art educators in the epistemological and cognitive issues in art; for example, what is there in Art to know and by what processes is that knowledge acquired? Ewing's research takes Ausubel's hypothetical construct, the advance organizer, and asks whether and under what condition it will facilitate a student's acquisition of knowledge about the art of film making.

Related Research

The review of the literature presents a great deal of information in a format

that is carefully organized and readable. It seems worthwhile reading for any student of learning theory.

The chapter is divided into seven sections. The first sections state the theoretical basis for the study, describe Ausubel's tests of his own theory, and state the conditions necessary for a valid test of Ausubelian Theory. In stating the necessary conditions for a valid test of the theory, Ewing effectively defines the literature to be reviewed and makes a case for his own experimental procedure. Literature relevant to the study's three main variables, the advance organizer, access (amount of time) to the advance organizer, and level of criterion test, is reviewed and summarized in tables that seemed especially helpful in dealing with the large quantity of information that was presented. For this reviewer, there was a concern that some of the salient theoretical issues got overlooked in the summarization of so many empirical studies. For example, it might have been helpful in understanding why this study was being carried out if the reader had been given more insight into what the theory generally proposes, how Ausubelian Theory differs from other learning theories, how the construct of an advance organizer relates to the general theory and why the author considered material based on "The Art of Movie Making" appropriate to test a theory of cognitive learning. Some of this discussion actually takes place in the discussion section at the end of the dissertation, but that seems a bit like finding out the stakes after you've made the wager. Ewing does not include a summary section in his extensive review of the literature which seems unfortunate. He sets out his argument, brings a vast quantity of information to bear for each of the three variables, but then does not draw a general conclusion. In the context of a dissertation, a conclusion to the review of the literature might be considered the advance organizer for the methodology. The absence of a summary does not diminish the value of the review of related research; it is informative. But it does diminish the strength of Ewing's argument that still another study of the effects of advance organizers would validate Ausubel's theory of cognitive learning or have relevance for art education.

Methodology

The rationale for Ewing's methodology is set forward in the review of the literature section when he lists the conditions necessary for a valid test of Ausubelian Theory, and is not repeated. There were five conditions specified. First, only meaningful verbal learning is involved; second, subjects must be of sufficient mental age; third, the comparison must be made between advance and nonorgnizer groups; fourth, the instructional period must be sufficiently short; and fifth, sound research methodology must be used.

Ewing randomly assigned a population sample of 80 eighth grade students to four treatment groups: advance organizer-restricted (AOR), nonorganizer-restricted (NOR), advance organizer-unrestricted (AOU) and nonorganizer-unrestricted (NOU). The treatments were based upon materials developed and validated by Ewing and were administered by classroom teachers as a classroom activity. Students in each group took a post test to measure learning and cognitive level of material learned, and a post-post test to measure retention and the cognitive level of the retained material. The post test was administered at the end of the exposure to the test materials, and the post-post test was administered two weeks later. The data consisted of test scores for each group, and were analyzed for significant differences between groups and among levels of learning.

Although the design, procedures, and treatment of the data appear to have

been appropriate and methodologically sound, critical review does not seem particularly appropriate because the instruments themselves are not included in the volume reviewed. In recognition of the time and effort that must have gone into their development, pilot testing, and validation, their omission seems a most unfortunate oversight on the part of several people.

Lacking the instruments however, questions of their adequacy or appropriateness, insights into why the results obtained might be so, or replicability of the study itself are moot for the present. The omission of the instruments effectively bars the reader from entry into the research process being reported and prevents informed agreement or disagreement. On the other hand, a reading of the methodology section gives the impression of a study that was reasonably thought through and carried out in a manner that was attentive to procedural detail.

Results and Discussion

The first hypothesis predicted that there would be no significant difference ($\alpha = .05$) in mean post test scores between groups employing advance organizers and those employing nonorganizers in the restricted mode for knowledge, comprehension, application level questions, or the three scores combined. It was not rejected for the separate cognitive levels, but for the combined scores. The mean combined scores for the AOR group were significantly higher than the scores for the NOR group. On the basis of the combined levels for test scores, Ewing concluded that the hypothesis was rejected.

The second hypothesis predicted that there would be no significant difference ($\alpha = .05$) in mean post test scores between groups employing advance organizers and those employing nonorganizers in the unrestricted mode for knowledge, comprehension, aplication level questions, or the three scores combined. The data relevant to this hypothesis displayed a pattern of results similar to the data relevant to the first hypothesis. Differences for scores on each of the three cognitive levels were not significant, but the difference between combined scores was. This hypothesis was also rejected.

The third hypothesis predicted that there would be no significant difference ($\alpha = .05$) in mean retention scores between groups employing advance organizers and those employing nonorganizers in the restricted mode for knowledge, comprehension, application level questions, or the three scores combined. This hypothesis was rejected on the basis of scores for the application level, and for combined scores.

The fourth hypothesis predicted that there would be no significant difference ($\alpha = .05$) between groups employing advance organizers and those employing nonorganizers in the unrestricted mode for knowledge, comprehension, application level questions, or the three scores combined. This hypothesis was retained.

In addition to the data directly relevant to the hypotheses, Ewing further analyzed the results to address his two initial unanswered questions. With regard to sex differences, he found girls in the AOR group had learning scores significantly higher than boys at the comprehension level and for the three levels combined girls also had retention scores significantly higher than boys at the knowledge and application levels. Ewing found that age was not a significant variable for his eighth grade subjects.

In the discussion section of this chapter, Ewing raises the question of the relation of his experimental results to Ausubelian Theory, suggests that there are plausible methodological explanations for the lack of stronger support, but concludes that his study can be considered supportive of Ausubel's Theory. The dissertation is concluded

with a brief discussion of the types of classroom materials that might appropriately employ advance organizers.

Reviewer's Comments

Ausubel's Theory of Cognitive Learning has an appeal for many highly qualified researchers. Part of its appeal for educational researchers is that it specifically addresses school in contrast to laboratory learning, meaningful as opposed to rote or nonsense learning, and receptive as opposed to discovery or incidental learning. It postulates a preexisting cognitive structure into which new information is subsumed. The advance organizer is postulated as an abstraction, which, under certain conditions, facilitates the integration (subsumption) of new material into the existing cognitive structure. Furthermore it suggests that if the new information cannot be reconciled with the learner's existing knowledge then a reorganization of the existing structure will occur under new, more inclusive concepts.

It is precisely the specificity and exclusivity of the theory that presents a major problem for art educators. Current educational practice in art is most frequently carried out in a studio. Within a studio or school art room, experience-based, problem-solving and discovery models for learning are generally considered the appropriate bases for instructional models in the arts, while receptive learning is usually considered counter to generating art.

These instructional models might be considered based on what Green (1977) has called the practical premise that children can think. In contrast, receptive learning postulates and describes a passive process of absorbing information. Passivity is generally considered counter to generating art. Consequently, it is not clear and Ewing did not make a case for why or how art educators would improve their instructional practices by employing Ausubel's Theory of Cognitive Learning. It seems that a case could be made. Art teachers can, and sometimes do require students to read before they do something. In a studio setting however, the test for knowledge, comprehension and application levels of cognitive learning would appropriately be in the generation of art, not the score of a performance on a multiple choice test. It seems that the area of questioning that would have been of most interest to art educators is whether there is a positive correlation between students' scores on tests about "The Art of Movie Making" and their actual ability to make movies. For example, does someone who scores higher than others at the application level make a better movie? Or, conversely, does a low application level score predict poor performance in the art of movie making? Or, for that matter, does Ausubel's postulated cognitive structure conform to Bloom's Taxonomy for the Cognitive Domain.

The dissertation being reviewed did not raise these questions, nor did it generate data relevant to their possible answers. Perhaps the major value of this dissertation for art educators is that Ewing's conceptualization of his research problem has raised questions for future research. This in itself is a positive contribution.

References

Ausubel, David I. *The psychology of meaningful verbal learning*. New York: Grune and Stratton, 1963.

Green, Thomas F. Three models of the instructional model. Unpublished paper, Syracuse University, 1977.

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THE DEVELOPMENT OF A SCALE FOR THE OBSERVATION OF IMPOSED CONDITIONS AND THE COMPOSITION OF CONTROL IN AN ART CLASSROOM AND A STUDY OF ITS POTENTIAL FOR USE IN TEACHER SELF-EVALUATION

Kathleen Anne Berhalter, Ph.D.
The Pennsylvania State University, 1976

Abstract

Purpose of the study: this study attempted to develop and test a measure for the observation of imposed conditions in an art classroom and the amount of teacher, integrative, and student responsibility of "control" exhibited. The primary goal of the instrument is to provide feedback to the teacher about his position in relation to control through his verbal instuctions during introductory teaching episodes. From a conceptual model of the control factors in an art classroom four major objectives involving the scale were defined: (a) to test the scale for feasibility and practicability in a series of classrooms, using self-study procedures; (b) to compare and analyze the data related to the expectations and perceptions of the teachers and students obtained through the use of pre- and post-questionnaires, and data obtained through the use of the scale; (c) to test the scale for reliability by determining the coefficient of agreement among six judges and the test-retest coefficient of stability; and (d) to test the scale for validity.

Procedures of this study: The thesis entailed a pilot study from which an instrument evolved. A series of tapes of introductory teaching segments was made at the three academic levels: elementary, secondary, and college. The first portion of the main study was concerned with a feasibility study for the use of the scale through self-study techniques, involving two groups of teachers. The teachers were trained to use the scale and coded tapes of their own introductory teaching segments. Through the use of questionnaires, the expectations and perceptions of the teachers and students were recorded for each segment. Five judges, including the investigator, participated in several coding sessions to determine the reliability of the instrument. Two judges, unfamiliar with the instrument, conducted a test for the validity of the scale.

Findings: 1. Classroom teachers were able to use the measure effectively with a high level of agreement as compared to independent coding. 2. It was possible to train coders to use the measure with a high level of agreement. The results show high reliability for both judge agreement and test-retest stability. 3. Although the sampling of teacher episodes was small, it was possible to draw general conclusions from the relationships for the population involved: a. As was expected, students' pre-questionnaires were fairly consistent within a grade level presumably because the student would be comparable in prior experience with the course and teacher. b. The majority of the classes observed were heavily teacher-specified, especially at the elementary level. c. It was expected that because of an increase in experience and self-regulatory ability due to age and maturation there would be an increase in freedom and a decrease in structure from the elementary to college levels. It was shown that the high school teachers do become somewhat less directive, but not substantially. The college teachers, generally, through shifting, do become less directive. d. It was indicated that there are many cate-

gories in which teacher-student agreement does not occur. An increase was noted in most cases on post-questionnaires, but there was still a gap between what the teacher and students perceived. 4. Two experienced art teachers were able to indicate the categories used in the scale with some accuracy. The validity tests used in this study can give only an indication that the scale does measure what it intends to measure.

Conclusions: From the testing it appears that there is a basis for accepting the scale as a viable and feasible method of self-evaluation for analyzing the proportion of classroom control in a given introductory segment.

Review

Robert D. Clements
University of Georgia

Statement of Problem

Berhalter shows how the movement away from a completely teacher directed strategy is a major thrust of both education in general and art education. She emphasizes that a frequently stated goal of art education is to help students become more independent of outside control. While this may be true for some teachers, I suspect that many art teachers would not consider this as one of their major objectives, opting instead to emphasize perceptual learning, aesthetic awareness, self expression, technical skills, art knowledge, design skill, or craftsmanship.

In order to help teachers assess their class control behavior, she developed a two-dimensional instrument. One dimension deals with who makes the decisions about such concerns as goals, topics, time, and technique; this dimension, termed composition of control, is scored either external (teacher-specified), internal (student responsibility) or integrative (jointly agreed upon). The second dimension lists those various conditions which the teacher or students can set: course goals, course organization, sequence of projects, grading procedure, topics, media, technique, time, and size.

Related Literature

In her thorough 30 page review of relevant literature, Berhalter cites over seventy sources, both philosophical and empirical writings. Philosophers and psychologists such as Dewey, Lewin, and Rogers are cited to support the need for democratic education. Experimental studies in art education are also reviewed. My overly simplified table lists a few studies cited and suggests the kind of problems with which they dealt; the mark* indicates which treatment was more effective.

Just as the art educational experimental studies cited predominantly support student-centered divergent instruction, so do numerous studies and writings cited from other fields of education. An annotated bibliography supplies further evidence of the importance of democratic education. Some classroom observational systems are reported on; recent art educational observation systems and studies are not included.

Objectives, Methodology, and Findings

The objectives were (a) to test the scale for practicality, (b) to compare expectations and perceptions of teachers and students through pre- and post-questionnaires and data by coders, (c) to test the scale for reliability and (d) for validity. From a pilot study, the instrument which is shown in Table II evolved. Subsequently, series of tape recordings of introductory teaching segments were made with elementary teachers, secondary teachers and college teachers. Data indicated on the Table II scale shows raters' judgments of the transcribed tape recording of the high school teachers' initiatory comments at

TABLE I

EXPERIMENTAL ART EDUCATION STUDIES RELATED TO TEACHER OR STUDENT CONTROL

teacher centered*	child centered	Neperud '66
structured motivational stimuli	unstructured motivational stimuli	Hardiman & Johnson '66
teacher centered art appreciation	student centered art appreciation*	Moorhead '67
convergent teacher training	divergent teacher training*	Sawyer '66
convergent design training	divergent design training	Vint '65
authority discovered criteria	self-discovered criteria*	Beittel & Burkhart '64

the course beginning and lesson beginning. Similar scales are given for the pilot study, and elementary and college levels. Parallel self-assessment questionnaires for the teachers, along with parallel assessment forms for the students to complete are also given. Comparisons of teacher-student agreement, and rater agreement are tabulated in 30 pages of tables.

Rather than calling the instrument a scale, I would use the more modest term "checklist," since no numerical rating is given to the strength of teacher or student-direction for each item. In Berhalter's scale, totals are arrived at by summing up column totals. Equal weight is given to items which seem to have very different weights, e.g., such major items as "sets course goals" and such minor items as "sets size of paper." To me, the entries seem like nominal data, whereas the totalling process suggests interval data.

Procedures were then developed to test the four propositions; the term "propositions" is used rather than the term "hypotheses," perhaps because much of the data is merely tabulated and "eyeballed," rather than subjected to statistical analysis. The first proposition, that the instrument would be practical, was confirmed by teachers' self reports attesting to the instrument's ease of use and value. The second proposition, comparing expectations and perceptions of teachers and students through pre- and post-questionnaires and coders data, was thoroughly investigated and data recorded in numerous tables. The conclusion was that students and teachers did not agree on many categories. The trend from the elementary level to college level moved from almost totally teacher-specified to somewhat less teacher-specified.

The third proposition was that six coders would be able to agree. Mathematics professor Francis Hsuan devised a method to calculate an index of agreement and a test-retest coefficient of stability; values between .90 and .71 were arrived at, and the Pearson chi square goodness of fit statistic produced values between 2.78 and .98. The fourth proposition was that the instrument was valid; face validity, sample validity, and construct validity were determined first by nine experts and then by two experienced art teachers independently estimating the control composition from tapes and arriving at results consistent with the scale.

Overall, the study's findings are scattered throughout many tables and are difficult to find and interpret. The statistical analysis is uneven; the mathematic professor's reliability section is treated in much detail, but other propositions are merely assessed from tabular data. In a study such as this, I expected to find a more sophisticated and even level of statistical analysis and more use of non-parametric statistics.

Reviewer's Commentary

The study is competently done. The

TABLE II

A SCALE FOR THE OBSERVATION OF IMPOSED CONDITIONS AND THE AMOUNT OF TEACHER/STUDENT CONTROL IN A CLASSROOM

	EXTERNAL CONTROL A. Completely Specified by Teacher	INTEGRATIVE CONTROL B. Specified Jointly by Teacher and Student(s)	INTERNAL CONTROL C. Completely Student's Decision
II. UNIT CONTROL	A	B	C
1. Task Designation	* * * * * * *		
2. Topic Choice: Specific Subject or Theme	*	*	* * * * *
3. Media Designation	* * * * *	* * *	
4. Delineation of Sub-Goals: Task Objectives	* * * * * *		
5. Task Approach: Problem Solving Process	* * * * * * * *	* *	
6. Use of Media: Technique	* * *	* * *	
7. Size Stipulation	* * *	*	*
8. Time Allotment for Task: Pacing	* * *		
9. Criteria for Unit Evaluation	*		
10. Choice of Exemplars, Models	* * * * * *		
11. Physical Room Arrangement and Seating			
12. Student Mobility and Organization of Supplies	* *		
13. Other Major Restrictions or Directives	* * *		

Teacher_____ Class_____

School_____ Date_____

COMPOSITE OF DOVER HIGH SCHOOL PILOT TAPES

writing and syntax is good. Form and footnotes are in good order. The problem is delimited, and a fresh approach is taken to it.

My criticism is not really directed at this one study, but toward the whole class of such studies which treat teaching (or any human interaction) in such a simplistic manner (teacher centered, learner centered, or interactive). Teaching is much more complex. To me, the teacher's task is to combine both structured learning experiences with individual freedom; in my opinion, both the open classroom advocates and the behavioral objectives advocates have

much to say that is good. For example, I am impressed by the way that the Montessori Schools combine structure and freedom.

My own experiences with teaching and learning in classes, working in institutions and bureaucracies, and living with my family indicate to me that most situations are interactive, with each party trying to maximize himself, taking into account the constraints of the situation and others' needs. The anecdote as told about President John F. Kennedy, who, pointing to his White House desk covered with special phones and hotlines, said, "See all those buttons: I can push them all and nothing happens." I feel that the numerous studies on classroom interaction have developed systems by which interactive situations can be classified in more detailed, specific, and helpful ways.

Another matter of concern to me is the issue of what the teacher (or student) controls. Berhalter focuses on the control of the mechanical aspects of the course: the tasks, time, grading, topics, media, size, and technique. On the contrary, in my teaching, I focus my efforts at control on level of warmth, cheerfulness, students' feelings of O.K.-ness and growth, and encourage good performance. I also attempt to control the depth to which the topic reaches the individual's interest, and to control his pride in the work by my formalistic technical guidance and by finding some instrumental use for the work in the school or community. Thus, it seems odd to me that Dr. Berhalter's analysis of teachers' control statements skirts the very nature of much teacher control verbalization. While its ultimate goal seems to be the psychological constructs of students' creative growth and self-determination, it focuses indirectly on lesson assignment methods rather than directly on the teacher's verbal efforts at controlling the students' psychological safety and creativity.

I realize, of course, how the two points of view are intertwined, and this study was a great help to me in thinking of the interconnection. Moreover, the study's narrow scope, focusing exclusively on initiatory statements, is a fresh way to consider what goes on in art classrooms. Furthermore, her rough system of categorization seems a good way to reveal to teachers the extent of their "bossiness" and their hypocrisy about being democratic.

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EVALUATION OF SELECTED COMPETENCIES IN ART EDUCATION FOR TEACHERS OF THE EDUCABLE MENTALLY RETARDED

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University of Northern Colorado, 1976

Abstract

The purpose of this study was to investigate the selected competencies in art education for teachers of the educable mentally retarded. Information was requested relevant to the following: a) specific personal and educational data; b) data of present vocational behavior; c) perceptions of selected art education competency statements pertinent to the respondents' teaching positions.

A questionnaire was prepared consisting of 34 selected art education competency statements deemed desirable in the training of teachers in art education for the educable mentally retarded.

Seventy special education teachers and art education teachers responded to the mailed questionnaires. The respondents were employed in the elementary public schools during the 1975-76 school year. The schools were located within a radius of 100 miles of Greeley, Colorado.

Selected demographic data were obtained from each of the respondents concerning their age, sex, teaching postions, degree or degrees earned, physical arrangements of teaching facilities, teaching experience and data concerned with pupil population. The above data were compiled and presented in tabular and written descriptive forms.

The data obtained were analyzed to determine the respondents' views of each competency in terms of need for each to be included in an art education curriculum. On the basis of the respondents' opinions, competency statements were ranked from that deemed to be of the greatest need for inclusion in an art curriculum to that indicated to be of the least need.

Analyses were also made to determine percentage of time each competency was used during the year by the respondents, the manner in which each competency was developed, and the respondents' opinions concerning the degree of proficiency development of each competency.

From the analysis of the responses of the 70 special education teachers and art education teachers surveyed, the following conclusions were obtained: 1. Relatively consistent agreement was found in the respondents' perceptions of the high and low rank ordering of the art competencies in the 3 areas. 2. It was evident from this study that when there was a great need for a competency, the respondents also ranked it high in the degree of their proficiency development and percentage of use during the year. 3. The respondents in their assessment of the competency statements found all of them to be desirable. 4. Competency number 20 was assessed relatively low in all areas in comparison with the assessment of other competencies. This competency dealt with diagnosing and classifying the educable mentally retarded.

Review

Kenneth Marantz
Ohio State University

I am going to take advantage of the liberties granted to me by the editors to write a somewhat wider-ranging essay than might be expected in a critical review of a doctoral dissertation. But

I believe it would be misleading to launch at once into a point by point analysis without first outlining the points of view I hold regarding such studies.

To me, there are major differences between doctoral researches and those done under other auspices. First of all, the candidate is not a free agent; he is constantly under the control of an adviser and frequently a committee. There are, further, institutional constraints relating to form and sometimes even content. Then there are the pragmatic limitations of time and budget. While none of us is ever totally free to pursue out thoughts, nevertheless the assumption of such liberty makes us much more personally accountable for our written efforts than doctoral candidates should be for their dissertations. When we criticize a dissertation we are, in fact, taking on a group of peers. Needless to say such an endeavor is a risky one because we do so out of the context of its creation. Each university conceives of the final testament to doctorhood in its own way, so to apply my standards to the result of a program based on distinctively different values would be merely a show of arrogant bravado and quite useless to the freshly annointed colleague or probably anyone else.

I prefer to approach dissertations as examples of writing in which some skills involved in research are exercised. Doctoral programs are training grounds of sorts, and we all know that the libraries' stacks are the expected burial grounds of these training documents. Indeed, we seem to will the interment of these studies by our guidance and control.

What I look for then is evidence of a mind and personality at work. There are several questions that are tacitly asked:

1. Is the writing clear and does it have a style?
   — are claims supported with evidence?
   — is technical language used sparingly in order to avoid esoteric jargon?
2. Is the problem a promising one, or at least does it touch on our field?
3. Are the data gathering and treatment processes appropriate to the objectives of the study?
4. Is there honesty in matching conclusions with actual findings?
5. Are recommendations based on the study?

If these questions can be answered in the affirmative, then I believe the writer has proven research abilities of a particular kind and that the document adds something to our overall understanding. In the case of Dr. Johnson's dissertation I must report a mixed set of responses. On the plus side, it would appear that she has a grasp on the statistical tools necessary to analyze the test scores she obtained. Each of her 24 hypotheses are challenged, in routine fashion, by data gatered from three standard instruments dealing with visual perception, reading readiness, and reading comprehension. While I commend her computational abilities, I am disturbed by some more fundamental issues.

I've already noted my belief that a written document should give evidence that the writer has a firm command of the language. Faulty statistical analysis leads to errors in conclusions and clumsy expository style leads to confusion in the setting of the problem. Thus, the Introduction ought to be created to take the reader to the top of the hill in order to observe the overall terrain before coming down again to inspect a specific field. But in the case in point, I found too many points of ambiguity, too many leaps from supposition to conclusion to get a sufficient understanding of the problem and its significance. I could note a series of minor confusions which, when taken collectively in seven pages, add up to a major flaw. But the listing would be dull and, in this context, pointless. How-

ever, let me suggest that as important a claim as the distinction between "the reception of information from the environment and classification of that information" demands explication; that the notion of this classification process as being "natural" needs argument; that "total readiness" is not that common a concept and therefore needs explaining; that the idea of "exposure to perceptual training" is a puzzling one when left without amplification.

But as important as it is for Dr. Johnson to realize some of the shortcomings of her expository skills, even more important is her tacit assumption that "art," as she uses it, is at all clear to others. She is careful to define many of the technical terms connected with perception, but she fails to do anything with such terms as "art," "art materials," and "language of art." The issue is indeed central to her study because she claims that "art" activities may be used to foster perceptual development as well as those activities contained in the Frostig Program for the Development of Visual Perception. Indeed, she bases her own Art approach on a careful analysis of this Program. But if she sells me on Piaget, et al., and the way young children develop visually, she fails totally to show me any art growth evidence. Indeed, from the single example of her own program she includes, I would have to ask what cutting and pasting geometric shapes on a piece of paper has to do with the art experience. Shouldn't this kind of a study make an effort to address this question? Isn't the connection or alleged connection between exercises in various physiological abilities like figure-ground discrimination or visual-motor coordination and even a Deweyan concept of an art experience (to say nothing of concepts based on other psycho-philosophical systems)? Isn't the nature of the bridge *the* question that undergirds such a study? Thus I found that 15 pages of literature review, a section that should provide the meat, gave instead a few crumbs. Even the few art education studies cited were those whose subjects were considerably older than the first graders of this study and so of questionable specific value. Can a study which makes use of the statistical method ignore the more speculative but equally important questions?

And on a final note, I felt more than a little disappointment in reading the study because the promise of the title which included reading, was not realized. Indeed, from the outset the failure of the Frostig materials to increase reading achievement was noted and the conclusions gave short shrift to any interest in that area. Reading as a learned activity remains a profound mystery in any case. Wouldn't it have been more honest to drop that area from the title of the study? And over half of the nine recommendations have no foundation in the study either. So why include them?

Even in this very brief and choppy review it's clear that what I was looking for may not have been what my colleagues in Indiana considered valuable. I must respect their judgment because I'm not familiar with their scene. Yet I believe in my own values and will continue to press for clarity and honesty in writing about our field. Whatever mode of inquiry dominates a study, unless it has those two qualities it cannot give us the fresh insights we all need.

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THE EFFECT OF VISUAL REALISM AND COGNITIVE STYLE ON THE PERFORMANCE OF SIMPLE AND COMPLEX PERCEPTUAL TASKS

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Syracuse University, 1976

Abstract

This study sought to resolve the conflicting proposals realism and the relevant-cue hypotheses by investigating the interaction of realism, task and cognitive style. It was hypothesized that more realistic representations would facilitate performance on complex tasks. The cognitive styles, field dependence and conceptual tempo, were hypothesized to predict differential performance with different pictorial representations.

Previous studies dealing with the realism variable had reported task related phenomena (Cobun, 1961; Linker, 1971), but no classification of tasks relating to simple perceptual operations had been attempted. Several previous studies investigated mental transformations; most have been undertaken with abstract objects. The classification of tasks by mental transformation was examined in this study using concrete objects in the pictorials.

Field dependence and conceptual tempo were isolated as two individual difference measures that might predict differentially a subject's performance under different pictorial representations and task complexity. These cognitive style measures had been related to analytic thinking, the need for some reinforcement and task difficulty. Previous research suggests that field independent and reflective students would perform equally well at each level of realism and task complexity, that field dependent and impulsive students would perform better under the more realistic representation and the simple task than the less realistic representation and complex task.

To enable generalizations to be made to group paced instruction fixed time intervals were used in the learning and testing conditions. Students were asked to remember ten pictures and later, took a 40-item pictorial test about the pictures. The test included items that emphasized differentials between the original pictorial and similar, slightly altered pictorials, and between the original pictorial and pictures taken of the same object from an angle differing by 90 degrees. The subjects (N = 103) were middle school students from sixth and eighth grades.

To partially eliminate guessing effects in responses, subjects were asked to rate their confidence in their judgment. This confidence rating technique enabled the analysis of results to be undertaken at two criterion levels.

A multivariate analysis was undertaken of a repeated measures design. Data were transformed for the analysis to enable higher order interactions to be tested. Differences in pictorial representations in the learning and testing conditions were analyzed as simple main effects. The two cognitive style measures were entered as covariates and the equality of regression within cells was tested.

From the results the following conclusions were drawn: 1. Field dependence and conceptual tempo do not predict performance on a visual recognition task of varying complexity. 2. The mode of representation for learning is important in later performance. Realistic materials produced higher performance scores on a recognition test than less realistic materials. 3. Learning and testing with photographic materials produced higher performance than

learning with drawing and testing with photographs. 4. To maximize transfer learning it is better to train and test within the same representation. If photographs are used for learning then performance on a visual test is higher when photographs are again used. The same can be said for the use of line drawings. 5. As the point-of-view changes from the original, materials become more difficult to recognize.

Review

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Statement of the Problem

Hedberg has investigated a timely and difficult problem, namely, what kinds of visual images are the most useful for educational instruction? The long-range purpose of such a study clearly is to improve the quality of visual instruction. Hedberg brings considerable scholarship, thoroughness, and no mean command of computerized statistical analysis to bear on his chosen question. He operationalizes his concern as follows:

> The study examined the relationship between levels of realistic representation in visual stimuli (photographs and line drawings), cognitive style of learners (field dependence and conceptual tempo) and complexity of perceptual tasks (recognition of stimuli spatially transformed.) (p. 1)

The results of this investigation in educational technology may be of considerable interest to perceptual psychologists, but will be of only tangential interest to students or teachers of the visual arts. The purview of Hedberg's research is so carefully defined that, by his own admission, his findings do not extrapolate very far beyond his experimental situation. As he says in his conclusion, "it would be invalid to generalize the results of this study to all mediated learning situations. The experimental design deals only with a short, fixed-time response and not with the flexible time response common in individualized learning." (p. 125)

While Hedberg's data may be of little interest to art educators, his approach to the problem of using visual images is worthy of note. He is interested in challenging the simplistic notions that images convey information *solely* because they are "realistic" or *solely* because they embody certain "relevant cues." He entertains the more complex notion that images carry information as a function of both these properties (i.e., realism and relevant cues) and *also* as a function of the cognitive disposition of the viewer. This rejection of simpler unimodal models in favor of a more complex interactionalist approach is to be commended.

Review of Literature

The review of the literature is clearly presented and organized. Each section is devoted to a separate issue, and each section closes with a short summary which pulls together the argument for the benefit of the reader. There are four key issues: the first two are the lack of a satisfactory definition of "realism" and the theoretical difficulties which exist in accounting for the ways in which stimuli at varying levels of realism are encoded by the learner. A third issue is the scant consideration which has been given in the literature to the ways in which the cognitive style of the learner interacts with level of realism in a visual image. The last issue reviewed is a consideration of the ways in which task difficulty interacts with the realism of an image. Much of Hedberg's discussion appears thorough and carefully researched. However, in his discussion of pictorial realism and of the theories associated with it, there are some egregious oversights. In the space of less than two pages the author discusses what he considers to be the important aspects of two theories,

> The first, which may be reviewed as the 'physics' approach . . . claims that a picture can represent an object insofar as the light rays from the picture are the same as the light rays from the original source. . . . The second approach, the 'philosophical' approach views a picture as a set of symbols which may be read . . . to provide meaning. (p. 8)

He cites Gibson (1971) as a proponent of the former theory and Arnheim (1974) as an exemplar of the latter. Nowhere in his discussion of the "philosophical" stance does Hedberg so much as mention Nelson Goodman (1968), a philosopher whose thought, according to Kennedy (1974), has laid the groundwork for the "philosophical" school. A truly glaring oversight is the complete omission of Gombrich (1961, 1969, 1972a & 1972b).

This eminent art historian and student of the psychology of art has developed many of the points suggested by Hedberg and his work could have been used to great advantage in this discussion of pictorial realism. Hedberg's skimpy discussion of theories of pictorial realism would have benefited greatly from a closer reading of Kennedy, particularly the chapter devoted to Four Theories of Pictures.

Research Objectives

By the conclusion of his review of the literature, the author is able to make a good case (marred only by certain omissions) for: the inadequacy of previous definitions of "realism," the lack of previous research interest in cognitive style and levels of realism in visual material, the lack of any useful descriptions of "encoding" mechanisms, and the lack of any systematic exploration of the mental operations required of learners using visual materials. On the basis of these deficiencies in previous research, the author's objectives for his study follow quite logically. His research questions are:

1. Does realism . . . in learning materials facilitate recognition under complex perceptual tasks? (p. 34)
2. Do selected measures of cognitive style predict performance on recognition tasks of learning materials with different degrees of realism? (p. 35)
3. Does performance on perceptual tasks differ with selected measures of the cognitive style of a subject? (p. 37)
4. Do subjects with different selected cognitive styles perform differently on the recognition of visuals with different degrees of realism and task difficulty? (p. 38)

Methodology

Hedberg's research design and methodology are one of the strongest features of his work. The reader is given exhaustive information concerning the precise testing methods to be employed, materials used, and nature of presentation. Due to the intricacy of the questions being asked, Hedberg is examining the effects of two independent variables, level of realistic representation, and cognitive style of the learner. On a dependent variable, the complexity of perceptual tasks, the research design is complex. It requires the use of statistical procedures such as multivariate analysis, analysis of main effects, regression analysis, and an analysis based on receiver operating characteristics. The actual experiment was as follows: sixth and eighth grade students were administered two tests of cognitive style, the Hidden Figure Test, and the Matching Familiar Figures Test. Following this, the students were given a series of recognition tests. They were tested in age-graded groups and were

> asked to remember ten pictures and later, took a forty item pictorial test about the pictures. The test included items that emphasized differentiation (sic) between the original pictorial and similar, slightly altered pictorials, and between the original pictorial (sic) and pictures taken of the same object from an angle differing by 90 degrees. (p. 114)

To get an idea of the actual test itself here is Hedberg's description of the test materials, "forty test items were produced by interspersing the ten learned pictures among thirty similar pictures. Of the 40 test pictures, 10 were pictures originally learned (five in the same representation and five in the alternative)." By this Hedberg means five pictures were line drawings traced from a photograph the students had seen in the learning session, while five were identical with the photographs the students had seen in the learning session. "Ten were transformations of the learned picture (five drawings, five photographs) and twenty were distractor pictures of similar objects (10 drawings, 10 photographs)." (p. 55)

Students had seven seconds during the testing situation in which to indicate on a response sheet whether the pictures they saw on the screen were "new" (i.e., pictures whose content they had never seen before) or "old" (pictures whose content they had seen before).

Findings and Conclusions

The findings from the experiment are equivocal. One of the issues most central to Hedberg's argument remains unresolved. He was unable to demonstrate a connection between cognitive style and performance on the experimental task:

> 1. Field dependence and conceptual tempo do not predict correct response performance on a visual recognition task of varying complexity. (p. 125)

A second finding is that in terms of a simple recognition task, realistic materials are more effective teaching aids.

> 2. The mode of representation for learning is important in later performance. Realistic materials produced higher performance scores on a recognition test, than less realistic materials.
>
> 3. Learning and testing with photographic materials produced higher performance than learning with drawings and testing with photographs. (p. 125)

Other findings from the study suggest that there is no *absolute* value in the use of either photographs *or* drawings, but that what is important is that the same mode of visual representation is used for both learning and testing.

> 4. To maximize transfer learning it is better to train and test within the same representation. If photographs are used for learning, then performance on a visual test is higher when photographs are again used. The same can be said for the use of line drawings. (p. 126)

The final conclusion seems hardly earth-shaking, namely: 5. "As the point of view changes from the original, materials become more difficult to recognize." (p. 126)

Hedberg's analysis of *why* he was not able to show any but a *post-hoc* interaction between cognitive style and task performance is instructive. He speculates that the test design may have introduced an additional variable, namely, the "psycho-physical" abilities of the students. In forcing students to respond to the test items quickly, the researcher may have inhibited a full expression of their diverse cognitive styles. (p. 117) In fact, one of the recommendations Hedberg makes for further study is the "inclusion of individual reaction time as a dependent measure which might allow the cognitive styles of the subjects to be expressed in their performance." (p. 126)

Acknowledging the limitations of his study, and the fact that several of his key points in relation to cognitive style have remained moot, Hedberg makes a number of sensible recommendations for further study. In addition to the suggestion already discussed he mentions changing the nature of the recognition task to include object transformations, varying the viewing angle from which the object is depicted and introducing measures of the psycho-physical characteristics of the learner.

Hedberg's thoroughness and caution are evident in the circumspect manner in which he deals with his results. He makes no bold proclamations or claims. Instead he points out certain interesting or unexpected findings and considers new ways of tackling them. This kind of unassuming presentation of results is a welcome relief from the bombast and grandiosity which characterizes much current research.

Commentary

Some comments on Hedberg's writing style are necessary. Although the material is organized and presented in a clear and systematic manner, the author on occasion expresses himself obscurely. The reader is left trying to decide whether this obscurity is a function of confused grammar or thought. As a case in point, here is his description of one of the guidelines used for developing the visual materials, "if the picture contains people they should not show ethnic bias different from the subjects." (p. 177) Now, what is one to make of this? Does the statement mean that in the experimental situation pictures of bigots will only be shown to bigots of a similar persuasion? Obviously not. Hedberg has chosen a painfully indirect way of saying, I think, that when the children tested are shown pictures of people, the people in the pictures are always to be of the same ethnicity as the children viewing the pictures. It is reasonable to take such a precaution in designing the materials; it is a pity, however, that this idea could not have been more clearly expressed. Similar kinds of circumlocutions occur in the text and the net effect is to slow the reader down.

Another, and somewhat less trivial example of obscure diction is found in his definition of representation (sic) realism as ". . . the extent to which a representational model is homomorphic with its real world referent, both in physical and psychological (e.g. meaningfulness, cognitive associations, etc.) respects." (p. 39) This statement is self-contradictory. It is not possible to have an imitation of the physical form of a psychological referent because psychological referents (e.g. anger, happiness, hope, familiarity) have no physical form to imitate. Without including the term "psychological" Hedberg would have defined realism as simply imitation of an object's external form. "Homomorphic" means "similarity in form," Webster (1960). Thus Hedberg may have introduced a reference to psychology and the "meaningfulness" of a representation as a way of avoiding the pitfall of the "realism" hypothesis which he rejects in his review of the literature. This reader chose to understand Hedberg's definition as a quasi gestaltist formulation, and he substituted the term "isomorphic" for the term homomorphic. That is, he assumed that Hedberg was referring to structural, as well as purely optical, correspondences. Hopefully this assumption was warranted.

In more general terms, this thesis has all the strengths and weaknesses associated with a statistically oriented piece of research. Hedberg has opted for a relatively narrow and well defined experimental situation. The results are predictably circumscribed. To paraphrase MacGregor's (1978) comments on another study recently reviewed in this journal, Hedberg felt impelled to adopt a stance which was strictly quantitative ". . . despite the crippling limitations of such research for the assessment of performance in the classroom." (MacGregor, 1978, p. 72) Visuals used in textbooks and individualized programs are not viewed in seven second bursts and, hopefully, students are expected to do more with such visuals than to simply decide whether or not they have seen the image before. Thus, Hedberg's task, regardless of how well it was justified in terms of the psychological literature, has hardly any resemblance to the way in which visuals are

used in a classroom. Hedberg's wish was to improve the quality of visual materials for instruction. One would presume that a researcher with such interests might go to a classroom and observe how such materials are used and abused. Yet this was apparently not done.

To this reader, it does not appear that Hedberg took into account two very important factors which govern the meaningfulness of visual imagery — the context in which such imagery appears, and the purposes for which imagery is designed. A better acquaintance with the work of Gombrich (1972), Arnheim (1974), Kennedy (1974) and Bruner (1957) might have forestalled such an oversight. As he indicated in his recommendations for further study, Hedberg may, in the future, consider some learning tasks which will require more of his subjects than the simple capacity to quickly recognize isolated images in various media. Additionally, perhaps this researcher can be persuaded to include in his experimental design, not only a consideration of the context in which images appear, but also an ideographic or case study component [see Berlyne (1977), Selfe (1977)].

The case study, it seems to me, does much in the way of sharpening a researcher's focus and of acquainting him with the real contingencies which the materials he is designing must eventually face. In my opinion the strongest kind of research program is one which combines both a statistical and case study approach — and as an example of such research I suggest the work of Olson (1970) and Cole *et al.* (1971). Both these researchers move deftly between close observation of their subjects in the field, and more global, statistical descriptions.

In this reviewer's opinion, were Hedberg to succeed in combining his already impressive quantitative skills with elements of qualitative research methodology, he would be in a much better position to more broadly resolve his initial questions. As it is, he has arrived at a number of suggestive insights which bear further examination.

References

Arnheim, R. *Art and visual perception.* Berkeley & Los Angeles: University of California Press, 1974.

Berlyne, D. Psychological aesthetics, speculative and scientific. *Leonardo,* 1977, **10** (1) 56-58.

Bruner, J. On perceptual readiness. *Psychological Review,* 1957, **64,** 123-52.

Cole, M., Gay, J., Glick, J. & Sharp, D. W. *The cultural context of learning and thinking,* New York: Basic Books, 1971.

Gibson, J. J. The information available in pictures. *Viewpoints,* 1971, **47,** (4), 73-95.

Gombrich, E. H. *Art and illusion.* Princeton, N.J.: Princeton University Press, 1961.

Gombrich, E. H. Visual discovery through art in Hogg, J. (Ed.), *Psychology and visual arts.* Harmondsworth: Penguin Books, 1969, 215-238.

Gombrich, E. H. The visual image. *Scientific American,* 1972a, **227,** 82-96.

Gombrich, E. H., Hochberg, J., & Black, M., *Art, perception and reality.* Baltimore: The Johns Hopkins University Press, 1972b, 1-46.

Goodman, N. *Languages of art.* Indianapolis: Bobbs-Merrill, 1968.

Kennedy, J. *A psychology of picture perception.* San Francisco: Jossey-Bass, 1974.

MacGregor, R. Review of the effects of types of perceptual training on selected factors of drawings of secondary school students. *Review of Research in Visual Arts Education,* 1978, **9,** 69-73.

Olson, D. *Cognitive development: the child's acquisition of diagonality.* New York: Academic Press, 1970.

Selfe, L. *Nadia: a case of extraordinary drawing ability in an autistic child.* London, New York: Academic Press, 1977.

Webster's new world dictionary of the American language. New York: World Publishing Company, 1960.

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A STUDY OF THE EFFECT OF A PROGRAM OF PERCEPTUAL TRAINING ON THE DRAWINGS OF INSTITUTIONALIZED MENTALLY RETARDED CHILDREN

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Pennsylvania State University, 1976

Abstract

A number of researchers have suggested that programs which enhance perceptual skills can become an effective means of enriching visual expression among children at various ages and grade levels. No one, however, has attempted to test the effectiveness of such an approach with the mentally retarded. The purpose of the study was, therefore, to study the effect of a program of perceptual training upon the drawings of the institutionalized mentally retarded child.

The population was selected from a residential institution in central Virginia. The subjects were selected from a population of educable mentally retarded children residing in the Monroe Annex of the Lynchburg Training School and Hospital. Twelve subjects were selected for the experimental group and twelve for the control group.

Perceptual training exercises were designed to make the student rely more on direct visual experience as the basis for visual expression rather than continue repeating themselves through the repetition of stereotyped forms.

The perceptual training tasks carried out in the study attempted to teach the subjects (a) to make finer distinctions between forms in visual materials observed, (b) to become more aware of details and (c) to include more details in their drawings of stimulus materials.

Subjects began by making a pre-test drawing of a still-life arrangement. This drawing was scored using an instrument called the Visual Elements Inventory, which was developed by the author. Four judges used the Visual Elements Inventory to score the drawings. The scores were then recorded to later be compared with the post-test drawing scores.

During the training sessions, subjects were directed to make careful observations of objects within still-life arrangements. They were instructed to look carefully at details such as color, texture, curved and straight lines. In some cases, subjects were instructed to handle objects and to draw them at close range. After a five-minute directed observational experience the subjects in the experimental group made drawings of the still-life arrangements. Members of the control group were given a free choice of subject matter and did not receive the directed observational experience.

The perceptual training exercises were carried out during fourteen subsequent sessions lasting 50 minutes each. At the conclusion of the experiment both groups were again directed to observe and draw the still-life arrangement. These post-test drawings were scored, using the Visual Elements Inventory, and the scores compared with the pre-test drawing scores and a test of significance carried out. The results indicated that the experimental group made gains that were significant at the .05 level. This suggests that the perceptual training approach to visual enrichment is a valid and effective means of enhancing visual expression among members of this group. In addition to the gains made by the experimental group, the control group also made gains which would seem to indicate that encouragement, practice and experience with drawing

served as a means of enriching works by members of the control group as well.

In an informal way, the study also compared directive and non-directive approaches to working with this population. The perceptual training exercises carried out with the experimental group were highly directive, which contrasted with the free choice situation provided for the control group. The experimental group made gains that were significant at the .05 level, which would indicate that the directive approach is a valid means of working with members of the population under consideration.

In addition to a comparison of pre- and post-test drawing scores, the author also carried out a brief descriptive analysis of the progress and characteristics of works produced by the subjects in the study in order to provide insight into characteristics of the works of individuals in the study and their working methods.

Review

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Research into the importance of art activities for handicapped children is vital today due to Public Law 94-142, The Education For All Handicapped Children Act, which was passed by the United States Congress and signed into law by President Gerald R. Ford on November 29, 1975. Two of the major purposes of P.L. 94-142 are to guarantee the availability of special education programing to handicapped children and youth who require it, and to assure fairness and appropriateness in decision making about providing special education to handicapped children and youth. Prior to the passage of P.L.-142, Section 504 of P.L. 93-112, The Vocational Rehabilitation Act of 1973 was enacted and has had far reaching implications for public education of handicapped children and youth. The statute reads: "No otherwise qualified handicapped individual in the United States shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance." In the past, a handicapped child developed deficiencies in education because he was "institutionalized" out of the mainstream of culture. Providing for a free appropriate public education for handicapped children and youth is a task now facing educators across the country and is causing them to take a new look at what various disciplines can provide for our handicapped youth.

Recently, the reviewer was contacted by the National Association of State Boards of Education (NASBE) for information on research into the importance of art for handicapped children. The NASBE was writing policy and procedures for implementing the "Mainstreaming Law," as it has become known, to be sent to all state boards of education in the United States. Researchers with the NASBE were having difficulty finding research about art for the handicapped child from which they could draw rationales for the importance of art for handicapped youth. Although Alexick does not discuss the P.L. 94-142 or section 504 of the Vocational Rehabilitation Act, he does state that because of the trends toward introducing educational processes into therapeutic and rehabilitation programs in institutions and toward "deinstitutionalization" of handicapped persons, ". . . we must learn more about the processes they [handicapped] engage in in carrying out their creative work. We need to know more about their response to a great variety of media and processes as well as learning which methods are the most effective in producing the most creative and

fulfilling results." (p. 2) This statement seems to be the basis for performing the study.

There is no clear cut statement of problem, and objectives must be gleaned from other statements which appear in most sections of the study. For example, on page 4 Alexick states, "It is the purpose of this study to better understand the effects of a perceptual approach to art activity as a means of testing its value and effectiveness with the retarded and as a means of better understanding their art and its potential for enhancing individual growth." He fails to make clear the variables being affected, and we can only assume that "its" value and effectiveness with retarded people and "its" potential for enhancing individual growth is referring to the perceptual approach to art activities. On page 9, Alexick states that "this study is an attempt to better understand the potential for growth and development within this population and the nature of that growth and development." He asks on page 48 ". . . can the mentally retarded grow perceptually and can perceptual training procedures that include a motor component enhance body awareness and produce the desired perceptual growth and development?" He writes that, "Specifically, objectives were: To increase the subjects' awareness of (1) details, (2) formal differentiation, (3) differences between forms and within forms, (4) spatial relationships, (5) the awareness of space around, within and between objects, (6) relationships of size, (7) differences in surface qualities or textures, (8) color, (9) tonal contrasts ranging from light to dark and (10) formal organization was also emphasized. Also, (11) to increase the students' awareness of 'distinctive features and structures' in stimulus materials." (pp. 79-80) Alexick indicates that the study was ". . . an attempt to understand what effect a program of directed perceptual learning experiences might have upon the drawing performances of the institutionalized mentally retarded child." (p. 94) It was also stated on page 117 that, "The present study was carried out in an attempt not only to test the effectiveness of a perceptual approach to enhancing visual awareness, but was also an attempt to learn more about the art work of the institutionalized child as well." Without a clearly stated problem and with conflicting and confusing objectives of the study, the reader is forced into making assumptions concerning the problem under investigation from the remainder of the research report.

Following a brief introduction to some of the problems of institutionalized children, Chapter One, "Background of the Study," presented information on The Lynchburg Training School and Hospital which provided the population and site for this study. Alexick continued by discussing the nature of the mentally retarded institutionalized child and proposed that some problems facing handicapped children are external in nature and are educational handicaps, while others stem from internal pathology. This view suggests that perhaps many conditions thought to be inherent in the condition of mental retardation are subject to change through educational techniques. (p. 13)

Related Research

Review of literature was divided into four sections. Part One concentrated on the drawing performances of the mentally retarded. Alexick noted that most studies of the art work of mentally retarded people explore drawing as a "projective technique" or as a measure of intellectual maturity. He believes that they do not reveal information about the nature of learning disabilities or the special abilities mentally retarded individuals may possess which can be developed through art activities. Theo-

retically, he seemed to be proposing that results of studies may be due to the lack of opportunities to observe rich visual stimuli and a lack of programs for perceptual training. (p. 34) Part Two explored research related to perceptual training procedures and was an attempt to identify the perceptual skills associated with drawing. Alexick suggested that directed perceptual experiences lead to better future observation of visual elements and that perceptual learning is the result of becoming more sensitive to stimuli. (pp. 40-42) Part Three examined the importance of body image in enhancing perceptual skills. Alexick proposed that it may be possible for mentally retarded persons to increase their perceptual skills if given perceptual training which includes "a motor component" to enhance body awareness. (p. 48) Part Four presented literature related to importance of motor activities in perceptual learning. He concluded that motor activities may be an inseparable part of the perceptual learning experience. Because drawing requires an integration of motor and perceptual skills, it is an important process for developing perceptual awareness. (p. 55) Although the reviewer has attempted to select theoretical elements from the review of the literature, Alexick has not synthesized these elements into a theoretical basis for the study.

Research Method

Consistent with the lack of an adequate statement of problem and a lack of research objectives which are clearly stated in terms of the problem under investigation, the design of the study is totally inadequate as a method of experimental investigation. Space will not permit the reviewer to cover all of the inadequacies or to suggest what ought to have been done in designing the study. Again, the important procedures were either vaguely outlined or non-existent. The population, which evidently consisted of 22 mentally retarded youths divided equally between the experimental group and the control group, ranged from age 16 to 18. Both groups were asked to make a drawing of a still-life, and results were scored using the Visual Elements Inventory (VEI) which was developed by the researcher. There were no reliability or validity scores reported and no indication that tests of reliability and validity were ever conducted. Four judges used the VEI to score the pretests and post-tests. There was no description of the qualifications or training of the judges and no report of interrater reliability scores.

Each group met weekly for 14 weeks (14 treatments). The first five minutes of the experimental group sessions were devoted to perceptual instruction and the remaining 40 minutes to drawing from a still-life arrangement. The control group was "given a free choice of subject matter" and was not required to draw from the still-lifes. This change in drawing task for the control group was an obvious confounding of the research data. Alexick found members of the control group spontaneously making drawings of him during their sessions. He states that, "As these subjects drew the figure, the author told them to observe arms, to observe their hands and fingers, to notice that the arms and legs bend at the elbow and knee and generally to become more aware of the human figure. The author was successful in getting the students [control group] to include more of these details in their drawings." (p. 92) Giving perceptual training to the control group is a procedural bias. Following the 14 sessions, both groups were asked to draw. These drawings, scored on the VEI, served as a post-test of perceptual skills. Alexick concluded that the experimental group made greater gains than the control group. The difference

between the two groups was significant at the .05 level. (p. 96) Although experimental and control group mean scores were reported, no scientific or statistical hypotheses were stated, no statistical method for arriving at the concluded level of significance was described, and no analysis of data to arrive at the statistical level of significance was reported. In effect, no statistical treatment was reported which would allow appropriate inferences to be made.

Conclusions and Commentary

Although conclusions cannot be validated through the statistical treatment of data presented in this study, it is the opinion of the reviewer that useful information of a theoretical nature exists. Thirty-four pages were devoted to individual case study reports of observations made by Alexick during the course of the experiment. Perhaps the researcher should have used participant observation techniques in his study; indeed, emphasis was on the generation of theory through naturalistic observation. Some of the major conclusions were (a) The perceptual approach to teaching mentally retarded students is a valid method of instruction; (b) mentally retarded people have more potential for growth in creative and expressive arts than they are given credit; (c) the non-directive approach, which allows the student to explore his own ideas, enhances visual expression; (d) institutionalized retarded children can do creative work; (e) it is important for the mentally retarded student to focus attention on a stimulus in order to enhance perceptual awareness; (f) the perceptual act and motor act cannot be separated; and (g) an adequate body image is vital for perceptual development. These conclusions appear to have been derived out of observations of individual subjects as they participated in the study.

In reviewing this study, I was again reminded of a problem art educators have been confronting since research became an important process for acquiring knowledge about art education. Researchers and theoreticians are searching to find alternative methods of research which are appropriate for the unique nature of learning in art. They are also identifying areas within learning experiences in art which are compatible with research techniques already in existence. Because the experimental approach was so poorly performed in this study and obviously not appropriate for the goals of the researcher, the reader is prone to dismiss the entire study without seeing that years of contact by the researcher with the population under observation is valuable for research in art and the handicapped. In-depth experiences with a situation, in which art is a context for learning, form the experiential basis for research and intuitively provide the theoretical ideas which give meaning to research in art education. A responsibility of researchers in art education is to explore and develop methods which can be appropriately used to examine observations made by teachers who are participating in learning situations in art. A task of the contemporary art educator is to integrate the work of the teacher with the work of the researcher, for they are inseparable. Teaching provides the "leading ideas" that John Dewey believed should direct the action of experimentation, but teaching also provides the experiential situation for verification of models of learning which are derived out of research in art education.

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DEVELOPMENT OF AN INSTRUMENT TO MEASURE QUALITATIVE DISCRIMINATION BASED ON VISUAL PERCEPTION RESPONSES TO ART

Rita Kathleen Roosevelt, Ph.D.
Fordham University, 1977

Abstract

The purpose of this investigation was to develop an instrument to determine the level of qualitative discrimination among a sample of students based on an analysis of visual perception responses to selected art works.

Two hundred and forty subjects from six schools participated in the study — 30 students randomly selected from grades two, five, eight, and eleven.

The instrument developed, *Aesthetic Awareness Responses Test* (*AART*), consisted of color reproductions of fifteen art works and the *AART* Manual. Representational, semi-abstract, and abstract paintings were included and each exhibited at least one of the visual grammar and/or visual design elements. Uniformity of size was achieved by dry-mounting each on boards measuring 30″ x 23¼″.

The *AART* Manual was developed to provide specific directions for administration and detailed instructions for scoring student responses.

Based upon the positive findings of a feasibility study, a pilot study was conducted with 40 students similar to the population of the major study. Students were administered *AART,* and were retested approximately 35 days later using the same instrument. The reliability coefficient was .88. A test of internal consistency of *AART,* using the split-halves procedure on the pretest scores yielded an alpha coefficient of .98. A check of interrater reliability yielded a correlation coefficient of 1.00 using a total of two raters.

Each student in the major study was shown each picture and was asked to describe what he saw. Forty-five seconds were allotted for responses to each picture. The taped responses were transcribed and subjected to the following content analysis categories: "Thing Perception," Movement, Artistic Knowledge, Inferential Responses, Art and Art Terminology-related Responses, and Affective Responses.

The category scores for Artistic Knowledge, Inferential Responses, Affective Responses, and the Total Scores were each subjected to an analysis of variance by grade level. In every instance, the results of these analyses indicated significant differences at the .01 level. The Scheffé method of comparing cell means yielded the following results: (a) second grade students scored significantly lower at the .01 level than all other grade levels on the category scores for Artistic Knowledge and Inferential Responses, and the Total Scores; (b) on the Inferential Responses category score, comparison of cell means between the eighth and eleventh grade indicated a significant difference at the .05 level and between the fifth and eleventh grade at the .01 level; and (c) eleventh grade students scored significantly higher at the .01 level than all other grade levels on the Affective Responses category score.

No significant difference at any grade level was found in Total Scores by type of school administrative arrangements, nor was any significant difference noted in eleventh grade Total Scores by type of elementary school attended. There was no interaction found between sex and grade level.

Age of student was found to be the best single predictor of both Artistic Knowledge (R = .58) and Total Scores

(R = .65) using stepwise multiple regression techniques. Addition of other predictor variables added only .05 and .04 respectively. When "number of art courses taken" was added as a predictor variable and the regressions run using Artistic Knowledge category scores and Total Scores of eleventh grade students only, the results were not conclusive.

The major finding that resulted from this investigation indicated that there was no significant change in the categories and number of artistic elements perceived by students beyond the fifth grade. Based on these results, serious consideration should be given to a reassessment of art education both in terms of the curriculum currently being offered and the goals set.

Review

Douglas G. Marschalek
University of Illinois

In reviewing this dissertation, the reviewer appreciated the researcher's adherence to a traditional format of research reporting which made the reporting of results clear. The overall impression of the Aesthetic Awareness Responses Test (AART) was that it shows a promise as an evaluation tool of visual discrimination through verbal responses to art works. The nine categories of artistic knowledge, the "thing perception," the movement, the inferential response, and the affective response categories were a well defined categorical system. The researcher is to be commended on the diversity of the instrument.

Procedures for testing the reliability and internal consistency of the AART revealed sound experimental procedures. Unfortunately the undersampling of variables not related to the AART, such as type of instruction, public versus parochial schools, and administrative arrangements of school programs, were poorly controlled. Are there theories to be tested concerning self-contained classroom teaching versus teaching in an art room? Theories of environmental influence on behavior can be systematically tested, provided there are specific controls over the environmental conditions and other confounding variables. There was little or no systematic control, description or measurement of the environments. In the view of the reviewer, too many areas were conceived important, thus effecting the research control quality. When one considers that 60 students for each grade level were sampled to participate in the AART, while only one school represented a given adminstrative arrangement, the emphasis and energy of the thesis lay clearly on the testing development and administration of the AART.

Because of the numerous and global nature of some of the variables, the introduction of the research problem and rationale resulted in unconnected ideas of the overall purpose of the thesis. The later statement of objectives, hypotheses, and research questions tied the looseness of the introduction together leaving the reviewer more assured of the research direction. Concerning the "Related Research Questions" (pp. 10-11), if the questions had been stated in the form of hypotheses, each hypothesis would have been testable in the final analysis.

A bright note in the introduction concerned the section devoted to the description of the instrument (AART) and the category system used to sort verbal responses to works of art. The categories were stated clearly and they demonstrated the researcher's care in selecting key definitions by expert authors in the fields of art history and art criticism. From this point on, the thesis tended to reveal direction. The summary of the first chapter pulled together the main emphasis of the research into four specific points, thus providing a more concise rationale. All of the

points made concerned the variables measured by the AART, while variables not related to the AART (administrative arrangements, parents' occupations, etc.) were not inferred by these statements. Again, the emphasis of the thesis seemed to be the AART.

Related Research

In literature review of developmental stages in the production of art (Read, 1969; Kellogg, 1970; etc.), learning theories related to art production (Gardner, 1973), and general intellectual growth (Piaget, 1953) an existing body of knowledge relevant to the results of the AART was outlined. One area not mentioned was the writing of Piaget on "Language and Thought of the Child" (1926). Since the AART used verbal behavior as an index of perceptual differentiation, the theoretical development of language across age levels would be a factor related to the findings of a developmental study. How verbal behavior and learning mediate perceptions of the visual world is an important question related to this thesis. The second graders' "line of development of language, as for perception, is from the whole to the part, from syncretism to analysis, and not vice versa" (Piaget, pp. 133-134). "Syncretistic understanding consists precisely in this, that the whole is understood before the parts are analyzed, and that understanding of the details takes place . . . only as a function of the general schema" (pp. 151-152). The very nature of second graders operating in a certain developmental stage of language, becomes an important factor when they are compared to older students of another level of language development.

The studies sighted concerning different teaching strategies (productive versus appreciative) indicated the need for the appreciative approach. This literature reemphasized the importance of measuring verbal growth to art. The review of research of verbal responses to art objects most closely related to the present research was clearly stated and relevant to the development of the AART. In two developmental studies by Machotka (1960) and Gardner (1975), verbal responses of various age groups to paintings were analyzed. Surprisingly, though, there was no mention of the developmental trends indicated by Machotka (1966). The results did. not indicate a decreased sensitivity in children's responses to art works, or a regression effect, around the age of 14. The results indicated a growth from simple concrete operations (response to color, descriptive comments related to subject matter) to more complex intellectual judgments (response to style, composition, affective tone) around the age of 12 to 18.

A second study relevant to this research endeavor was the Gardner (1975) article "Children's Conception of the Arts." This article was referenced, but was not discussed in the literature review nor in the introduction and statement of purposes. This study, after examining verbal responses of three age groups (4-7, 8-12, and 14-16 years of age), indicated three distinct developmental levels of responses. With increase of age, the subject's responses became more complex and indicated greater awareness of the complexities of the art object and the social importance of art. There was no indication in the Machotka (1966) study or in the Gardner (1975) study that verbal responses to art objects followed similar regressive effects as those which commonly occur in the production of art during adolescence. Hypothesis I and Research Question I tested the existence of a regression of discriminatory behavior in adolescence.

Methodology

The review of this section will be divided into three areas: (a) the selection of the subjects, (b) the selection of the stimulus, and (c) the experimental

design. The selection of communities was well established through data collected by the United States Bureau of the Census. The communities selected were similar on five criteria, definitely justifying the selection. Unfortunately, the actual schools selected were substantially different in numerous characteristics, e.g., years of teaching experience of the faculty, teaching style of the faculty, number of courses available, program funding. Because of the lack of adequate control of these possibly confounding variables, the effects of administrative arrangements of instruction and public versus parochial schooling as reliable predictors of scores on the AART are questionable on the grounds of internal validity. Anything affecting the controls of a design becomes a problem of internal validity (Kerlinger, p. 325). A much larger sampling of schools would reduce this error. The reliability and internal validity of the AART is not in question here.

The selected stimulus (15 paintings) represented well defined categories. Each painting contained one or more pronounced visual element(s) or visual design elements. This method, a predetermined criteria, justifies and qualifies stimulus selection rather than the use of a random wide range of styles or periods of art.

The analysis of the AART to meet reliability and internal consistency points to thorough research procedures. The interrater reliability assessment could have been expanded to rating the nine categories of artistic knowledge, instead of arriving at a reliability based on the four major categories. There are no serious doubts that high reliability would have been achieved if the further breakdown of categories had been analyzed.

Some caution must be expressed concerning the single order of presentation of the paintings. Even though a split-half procedure to measure internal consistency of the instrument resulted in an extremely high index (alpha coefficient) of internal consistency, this may not detect the effects of a single order presentation. For two reasons, this may influence the data. First, one stimuli may effect the response given to the following stimuli. Second, subjects may be uncomfortable at the beginning of the session and thus less verbal. On page 61, number three, the researcher stated, "... in fact (the subjects), became more attentive and verbal as the test progressed." There seems to be agreement here between the researcher and the reviewer that the first few images are possibly biased, that is, fewer responses would be made concerning those paintings. Since each painting contained predominant element(s) or design(s), it is possible that these elements would have been reduced in magnitude in the final tally.

The execution of the pilot study and the major study were carried out without apparent bias influence of the researcher. The research procedures evidenced the ability of the researcher to qualitatively measure variables stated important to the objectives of the study. Verbal responses were easily categorized and resulted in a manageable data form. Since the AART was initially designed to be used by school teachers and administrators as a measure of visual discrimination to art objects, the research method and analysis procedures deserve praise. Too often the mechanics of a test become too encompassing for practical use.

Results and Discussion

The organization of the results (Chapter IV) was clearly and logically developed. A review of the objectives of the study opened this chapter, followed by systematic testing of each hypothesis and research question. The statistics used were stated and tables were placed for easy reference. A brief summation of the results and a statement of acceptance or rejection of the hypothesis made this chapter concise and informa-

tive. A point by point summary of the findings at the end of the analysis section proved to be helpful to capsulize the numerous statistical analyses, graph, and tables.

The analysis of the data indicated no apparent regression with age in terms of the discriminatory skills used by students in their perceptions of works of art. This proposes two further hypotheses: (a) there will be no further development of discriminatory skills after age 10 to 11 (grade five), or (b) there will be a continued increase of discriminatory skills after age 11.

A little closer investigation of these data may reveal a slightly different interpretation. Concerning the verbal responses of second graders in comparison to the other three age groups the reviewer questions whether second graders are less verbal than older children. The second graders' total mean score (on the AART) was 136.90 while those of grades five, eight, and eleven were 217.43, 211.58, and 224.42, respectively. This may suggest that children in grade two provide fewer verbal responses in the 45 seconds response time per painting than do older students, or possibly that second graders say as much but repeat themselves, or use the same words to describe the paintings; e.g., "big green house," and "green grass" would be scored green once, house once, and grass once (p. 185). This should be evaluated by the researcher. A frequency count of words or phrases could be tabulated for each age group from the transcripts.

A second point in interpreting these data considered the score for the Artistic Knowledge Category in relation to the total score on the AART for each age group. The percentage of verbal responses pertaining to the Artistic Knowledge Category for the grade levels of two, five, eight, and eleven were 29.79%, 32.91%, 34.11%, and 32.51%, respectively. Even though the second graders' scores were significantly different from the scores of the other grades, it is an extremely small change in a positive direction. It seems that second graders say less, but that they use the category of artistic knowledge with near equal frequency in proportion to their total score. The importance of the results does not seem to lie in the second graders' less frequent use of the Artistic Knowledge Categories, but rather, in which of the other categories there occurred shifts in the percentage of use on the entire AART, not just the Artistic Knowledge Category. A greater sampling of analysis would reveal where trends occur across age groups.

The multistep regression analysis provided little new information. Age, the predominant predictor of scores on the AART, was not a surprising result. No rationale was forwarded in the literature review that would have predicted any of these variables. Other variables as I.Q., reading ability, vocabulary, etc. might be equal to or more potent indicators predicting scores on the AART.

Reviewer's Commentary

The reviewed thesis was on the whole clearly presented and logically ordered, especially the analysis and results section. The education goal of greater verbal competency and fluency is recognized as one objective of art education. Possibly greater emphasis needs to be placed here. The AART has the potential of becoming a plausible tool for educators to measure and evaluate children's growth pertaining to verbal descriptions of various art media. The AART provides a more systematic subdivision of the four categories used by Valentine (1962) and also expands and places greater emphasis on elements of art than did the categories used by Machotka (1966). Other factors (language development) influencing the results need to be seriously considered if responses are to be representative of subjects' real ability to respond. For

example, a longer or unlimited responding time for each picture may allow older subjects to explore, compare, and thus to make more qualified judgments about art works. In 45 seconds only salient qualities may be stated with similar salient qualities holding across grade levels. Once one begins to go beyond salient remarks it is likely that older or more trained subjects will clearly surpass younger children. In this respect, the form of the question(s) or direction(s) given at the onset of the experiment definitely influences the type and broadness of subjects' responses. This may press subjects to sharpen and differentiate their responses.

All studies concerned with development need to justify what exactly constitutes the difference between responses that belong to concrete operations and those that represent formal operational thought. Second, the experiment must insure that formal operations of thought are possible, given the command, i.e., the direction of how the subject is to respond, the research setting, and the type of dependent variable.

References

Gardner, H., Winner, E., and Kircher, M. Children's conceptions of the arts, *The Journal of Aesthetic Education,* **9** (3), 60-77.

Kerlinger, F. *Foundations of behavioral research.* New York: Holt, Rinehart and Winston, 1973.

Machotka, P. Aesthetic criteria in childhood: justifications of preferences, *Child Development,* **37,** 877-885.

Piaget, J. *The language and thought of the child.* New York: Harcourt and Company, 1926.

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PICTURE CONTENT PREFERENCES OF YOUNG CHILDREN AS INFLUENCED BY AGE AND SEX

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University of Arkansas, 1977

Abstract

The purpose of this study was to investigate what kinds of picture content children prefer and if those preferences are related to age and sex. Children's verbal responses were also noted and categorized. The following null hypotheses were tested: 1. Children will select the various content categories with equal frequencies when given both forced-choice and free-choice tasks. 2. The two groups (boys and girls) will select various contents with the same frequencies for forced-choice and free-choice tasks. 3. The three age groups (kindergarten, second, and fourth) will select various contents with the same frequencies for forced-choice and free-choice tasks. 4. The two groups (boys and girls) at one age level (kindergarten, second, or fourth) will select various contents with the same frequencies for forced-choice and free-choice tasks.

The sample consisted of 90 kindergarten, second, and fourth grade children attending a public elementary school in north Arkansas. There were 30 children in each age group with an equal number of boys and girls.

Each child was given a forced-choice task consisting of eight plates containing four photographs which represented each predetermined content category (human, animal, landscape, and still life). The child was required to select a favorite photograph from each plate.

Upon completion of the first phase the child was introduced to the free-choice task which included 16 photographs, four in each content category. The child could select any four of the 16 pictures. All photographs were black and white. The children were individually tested and verbal responses were recorded on tape.

Analysis of the data using Chi Square with alpha set at .01, allows the investigator to reject hypotheses one, two, and the forced-choice situation of number four. Hypothesis three and the free-choice task in hypothesis four were accepted as significant differences were found.

Children select some content categories at a greater frequency than other types of content. Boys prefer content categories at different frequencies than girls. For forced and free-choice tasks, each age group selects content categories similar to the preferences of the other age levels. Boys and girls at one age level select various contents with similar frequencies for the free-choice task but not for the forced-choice situation. Most of children's verbal responses to pictures can be categorized under three main headings: "Identification," "Comment of a Specific Object," and "Aesthetic." In this study "Comment of a Specific Object" was the most frequent type of response given by children at all age levels.

Review

Robert L. Cardinale
University of Arizona

Statement of the Problem

The purpose of this study was "to investigate what trends of (picture) content are preferred by most children, boys and girls" (p. 3). The investigator was also concerned with how age and sex affected children's choices for picture content. As an underlying rationale for the study, Clauss hoped to provide further information on the aesthetic growth of the child, primarily by evaluating the children's comments toward preferred content. Although not specifically stated until Chapter 3, the study is limited to content choices of two-dimensional artistic images, in all cases paintings. Both the statement of the purpose and the title of this investigation could have been worded more accurately to reflect how the research related only to the children's choices of reality as depicted in selected paintings. As Gombrich pointed out in his classic Hobby Horse article, there is indeed a difference between the object itself and a representation of that object. The questions to be addressed by the study, stated in Chapter 4 as hypotheses, were as follows:

1. Will children select the various content categories (of painting subject matter) with equal frequencies when given both forced-choice and free-choice tasks?
2. Will the two groups (boys and girls) select various contents with the same frequencies for forced-choice and free-choice tasks?
3. Will the three age groups (kindergarten, second, and fourth grades) select various contents with the same frequencies for forced-choice and free-choice tasks?
4. Will the two groups (boys and girls) at one age level (kindergarten, second, or fourth grade) select various contents with the same frequencies for forced-choice and free-choice tasks?

While the contrast between forced-choice and free-choice situations adds depth to the study, no mention is made of a rationale for selection of such an approach.

Related Research

Clauss reviews the related research in four clearly defined areas: (a) Developmental Differences, (b) Sex Differences, (c) Socioeconomic Differences and (d) Importance of Content. Research for and against the purpose of the study is cited and clearly summarized. On the developmental differences of children's choices, some 20 studies are discussed, resulting in the conclusion that "young children's aesthetic sensitivity is not fully developed and as a child grows older he/she is more likely to be sensitive to styles and forms of art that are complex and less realistic" (pp. 19-20). Her review shows that not only do children have strong preferences for art works, but they also tend to prefer paintings that are also enjoyed by older children.

The review shows that researchers do not agree that sex differences affect children's choices in paintings. Such disagreement clearly calls for additional study relating specifically to sex differences and painting choice.

Although not directly related to the purpose to the study, Clauss discusses the research on socioeconomic differences and concludes again that the data do not clearly indicate that such differences affect painting choices. Why this research is reviewed is not clear, for in her statement of delimitations of her study, the author notes, "no attempt was made for evaluation of home influences and social class" (p. 7).

Extensive sources are cited regarding the importance of content on painting choice, strongly supporting "the notion that young children's preferences for art are based more on content and color than on any other aspect" (p. 29). However, her research failed to un-

cover studies that included content study as a major part of the research design, thus again supporting the need for the present study.

Methodology

The subjects of the study were 90 children randomly selected by draw from one elementary school. The population was selectively balanced according to sex resulting in 15 boys and 15 girls from each group kindergarten, second grade and fourth grade.

The 100 paintings used included 25 each of the following subject matter: human, animal, landscape, and still life. From these 100 paintings, 12 in each category were selected at random, photographed in black and white (4″ x 5″) and mounted for use in the study. By eliminating the color variable, the investigator, wiser from the research of others, allowed the subjects to focus more attention on subject matter. The investigator makes no mention of the problem of style nor period in the original selection of 100 paintings. Style as well as familiarity were reported in the research to affect choices. Presumably more recent works would be more familiar to the children and thereby affect their choices. Also, no attempt seems to have been made to balance the original painting selections between artists with a tremendous degree of exposure, such as Van Gogh, and other fine painters such as Charles Sheeler who have not had the mass exposure of their works. All works selected, however, were of a realistic/naturalistic orientation.

A two-phase instrument was used consisting of (a) a forced choice situation and (b) a free choice situation. In Phase I the child had to choose from four reproductions of paintings representing the four content areas mounted on eight separate plates. In Phase II, there were 16 separate photographs from which the child could choose. The mounting of the plates was thoroughly randomized to avoid any type of bias in the groupings. Also during the actual Phase I interviews with children (10-30 minutes each), the sequence of plates was altered so that the first child saw Plate 1 first, the second child saw Plate 2 first, and so on. This technique partially eliminated the problem of seeing a very strong picture first, but did not counter the effect of seeing the pictures in nearly the same sequential order. A randomized sequence for each subject would have been preferred.

In Phase II, each child was shown 16 photographs spread on a table and requested to sort them into a preferred and less preferred pile. From the preferred pile, the subject was asked to select four that were his/her very favorite ones. As in Phase I, each child was asked to tell why he/she preferred each of the four selected.

Data Analysis, Conclusions, and Discussion

A Chi Square Goodness of Fit statistic testing Hypothesis One used total scores for each task categorized into the four content categories. The hypothesis was rejected as the children in both situations most frequently preferred the animal category, followed by landscape, still life and human subject matter respectively.

Hypothesis Two was analyzed using a 2 x 4 matrix of total male/female scores listed in the content categories for each task. This hypothesis was also rejected (although Clauss says on p. 46 that it was accepted), as the children did not select the various contents with the same frequencies for forced-choice and free-choice tasks. Both boys and girls selected animal content more frequently, but the remaining choices differed. Boys' order of choices were animal, landscape, still life, and human while the girls chose a different order:

animal, still life, landscape, and human. Clauss shows by use of the Chi Square Test of Independence that these findings are signigicant at the .01 level.

Hypothesis Three was accepted as no significant differences occurred in the frequency of selected content categories at the three age levels.

Also accepted was the free-choice portion of Hypothesis Four as no significant difference in choice occurred at the three levels. There was, however, a significant difference shown in the forced choice situation.

The investigator also recorded and categorized the verbal responses of the children regarding their preferences. No statistical analyses were run on this data nor were any explanations given as to how the four response categories were derived. The classification receiving the most attention was "comment on specific object" followed in nearly all of the situations by "identification," "aesthetic," "other" and "no response."

In all, the study was designed quite accurately and thoroughly carried out. While a number of minor problems have been pointed out in the course of discussion; of more concern are some omissions of a conceptual nature. No evident cognizance of the very real problem of using images of images with small children is of great concern. Are the children relating to the subject matter as real because in most cases they know that they are looking at a photograph? Or are they relating to the artist's expression or personal vision of a selected person, animal, landscape or still life? Previous research shows confusion on the part of children in being able to distinguish between the picture of a thing and the thing as an entity in itself.

The investigator makes no reference to the problem of the children relating to three-dimensional objects in a second generation flat image. And further, one cannot help but wonder what children's responses would be to three-dimensional art objects. This leads to an important area of art education research which needs much more investigation: response to art objects such as crafts, sculpture, and architecture.

This study could indeed be replicated using different art forms. Also, some interesting correlations might be made between the preferences of teachers and parents to those of the children. However, before any more studies of this type are conducted, serious thought needs to be given to specifically how such data is important to the overall art education of the child.

Reference

Gombrich, E. H. Meditations on a hobby horse or the roots of artistic form. In George Pappas (Ed.), *Concepts in Art and Education*. New York: Macmillan, 1970.

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A COMPARISON OF SPATIAL RELATIONSHIPS IN THE DRAWINGS OF ADVANTAGED AND DISADVANTAGED ELEMENTARY SCHOOL CHILDREN IN MISSISSIPPI

Elizabeth Joan Stansfield, Ph.D.
University of Southern Mississippi, 1977

Abstract

Statement of the Problem

This study sought clarification of the following problem: Do the spatial relationships reflected in the drawings of economically advantaged children differ significantly from the spatial relationships reflected in the drawings of economically disadvantaged children in grades, one, three, and five? The variables included sex, race, age, ratio IQ, grade level, socio-economic status and visual motor integration. The criterion (drawing achievement) was measured by the Eisner Visual-Verbal Drawing Scale.

Procedures

This study's total sample consisted of 152 members of the first, third, and fifth grade students in a southern county school district in Mississippi.

Data for this study were collected utilizing the subjects' school records and two tests which were administered by the investigator during regular school hours.

The Eisner Visual-Verbal Drawing Scale, the Visual Motor Integration Test, and the NORC Occupational Prestige Index were the instruments utilized to determine each student's composite drawing achievement, visual motor skills, and socio-economic status, respectively. Product moment correlation was used to determine relationships between the Eisner Visual-Verbal Drawing Scale and each hypothesized variable. In addition, multiple regression techniques were also employed to analyze the data. Veldman's Program Regran was utilized, and its results were reported as means, standard deviations, correlation matrices, R^2 coefficients, and probabilities.

Major Findings

This study's major findings were: 1. The socio-economic status of the two groups investigated in this study was not significantly related to the way children organize and create space in their drawings. 2. The relationship of grade level and the criterion, Eisner Visual-Verbal Drawing Scale, was significant. An additional multiple correlation with each separate grade level revealed that in grades one and five there were small but not significant correlations between the criterion and socio-economic status which indicated a direction toward supporting the relationship between socio-economic status and drawing ability. 3. There was no significant difference between the drawings of boys and girls. 4. The combination of the variables (sex, race, age, ratio IQ, grade level, socio-economic status, and visual motor integration) was significantly related to drawing achievement. 5. There was a significant relationship between ratio IQ and the drawing achievement. 6. A significant relationship was found between visual motor integration skills and the criterion. 7. The relationship of age with drawing achievement was significant.

Recommendations for Further Study

Based on the results of this study, the following recommendations were suggested: 1. That a comparative study be conducted which could obtain clear and accurate information in the parental income variable. 2. That a similar study be conducted extending the age range of the subjects to seventh and ninth grades.

Review

Marjorie Wilson
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Statement of Problem

Upon reading Elizabeth Stansfield's dissertation one is compelled to reflect on the meaning of research and inquiry, study and contribution. The long honored tradition of research has meant a close and careful investigation of ideas; it has meant taking a closer second look in order to affirm some of our assumptions, to say as Eisner did when he conducted this same study in 1967, "(I) wish to test my belief that in the area of drawing, children who were disadvantaged in academic-discursive areas might not be disadvantaged." Research deals with theory construction and theory evaluation. The feeling of *deja vu* is such a pervasive one that it is necessary to use the original Eisner study in order to approach the Stansfield study. Eisner was interested in answering some questions in order to "objectively appraise its (children's art) development under typical conditions." One of Eisner's main purposes in conducting the study of "the developmental drawing characteristics of culturally advantaged and culturally disadvantaged children" was to develop the scale which Stansfield has employed. Eisner's reasons for pursuing the answers to these questions are clear but the purpose for Stansfield's pursuit of the answers to the same questions remains murky at best. In scientific inquiry replication is an important dimension but in such a case the replication should be carried out in at least as rigorous a manner as the original. This study fails to qualify on any of these points, but then Stansfield neither claims that her study *is* a replication of Eisner's nor does she indicate that she will further use the information for some purpose of her own. She does state that she will clarify the "problem" (which Eisner rightly identified as a "question") of a comparison of spatial relationships in the drawings of economically advantaged and disadvantaged children in grades one, three, and five within a selected elementary school system in Mississippi. If it is, then, as it appears to be, a simple case of using the scale developed by Eisner to see how these particular children perform, then the research is thin indeed. When there are so many questions that might have been raised, problems to which we have no answers, problems that are reasonable extensions and those raised by Eisner himself relative to the same problem, so much more could have been done that might have been of benefit to the field.

Research Objectives

In the 1969 *Studies* article describing his study, Eisner states that he was undertaking the problem of constructing a "visual-verbal" scale, consisting of 14 categories "for classifying children's drawings with respect to spacial syntax." The categories were presented as a series of "visual exemplars" accompanied by their verbal descriptions. Stansfield claims to be using the Eisner Visual-Verbal Scale to measure "the ways in which children of different ages create and use space in their drawings," a statement which seems to bear out an earlier assessment of the superficial nature of the study.

Totally unclear is the statement, repeated five times in "Purposes" and five times again in the stated hypotheses that measurement of, for example, grade level, sex, socio-economic status, etc. will be made in relation to the "results of the Eisner Visual-Verbal Drawing Scale." A scale does not elicit results but is employed for the purpose of measurement; even more problematic, however is her third hypothesis which states, "There is no significant relationship between the sex of the subjects of this study and the Eisner Visual-Verbal Drawing Scale." Not only are the objectives of the research unclear, but these statements also reflect the lack of clarity of thought and language.

Methodology

The subjects of this study consisted of the total population of the first, third, and fifth grade classes in a single school. Whether they were "advantaged" or "disadvantaged" was determined by the population decile of the National Opinion Research Center, not surprisingly the same instrument used by Eisner. Eisner, however, used as his sample children from two distinctly different segments of the population: those from a purely upper-middle-class neighborhood and those living in a ghetto. Stansfield uses as her sample children in the same classroom, in the same school, in the same town in Mississippi. The reader is told nothing more about the school other than its name and geographical location. Not even a minimum description is given of the sample. Are there, one wonders, two different sections of the county from which the school draws its students? Or are there two distinct populations within this one school because of factors such as busing? An explanation would tend to allow the reader to draw some conclusions about the sample.

As for the method for collecting and analyzing the data, Stansfield allows only that the instruments were administered by the researcher in cooperation with the teachers of each grade level concerned. An appendix describes the motivation given for the space task but here again the reader is given no indication of the way in which the drawings were scored. Did the researcher score them herself? Were there at least two judges? What was the scorer reliability? The methodology is open to a great many questions. Because of the inadequate descriptions of the procedures followed, it is impossible to have confidence in or to interpret the findings of the study.

Related Research

Stansfield reviews the standard archaic literature of child art and outlines numerous descriptive developmental studies which seem not to bear directly upon the problem being studied. Returning to Eisner's research, however, serves to explain the reasons for this particular review of research. Eisner uses the developmental theories to point to their inadequacies as measures of changes in child art. Eisner then puts forth the theory that "most of the variance found in children's drawings can be accounted for by learning," a theory that Stansfield has chosen to ignore in her slavish borrowing of Eisner's work, yet one which, if acted upon, might have led to a richer, more interesting and infinitely more original piece of work. The reasons, then, for Eisner's outlining of developmental theory are clear but Stansfield has done only a part of her homework. The references are misplaced albeit carefully excerpted. Eisner, for example, in referring to the position held by Altschuler and Hattwick states, "This position holds that young children's paintings were essentially reflections

and projections of their personalities." Stansfield writes, "Rose Altschuler and LaBerta Hattwick believe that young children's paintings were essentially reflections and projections of their personalities." On McFee, Eisner writes, "Four categories constitute the major elements in McFee's theory, the readiness of the child, the psychological environment in which he works, his ability to handle and process visual information, and delineation skills which are directly involved in art production." Stansfield excerpts it to read, "June King McFee identified four factors or points that affected the child's performance in art, his readiness, his ability to handle information, the particular situation in which he was to work, and the delineation skills he possessed." Eisner is given no credit. The original source is cited rather than the secondary source from which this material seems to have been drawn.

More important to the study is the literature dealing with the child's concept of space, which unfortunately is mentioned only in passing. Even here, in reporting on an early study of Clark, she might have referred to such studies as Lewis' replication of the Clark study in which Lewis accounts for the rapid movement of children in Clark's day to a "mature level of representation" by instruction in drawing. Here again the tantalizing idea of instruction arises, an idea that might then, even following Eisner's lead, have been pursued.

Results and Discussion

Whether Stansfield's findings indicated that no significant relationship was found between socio-economic status and drawing achievement can be accounted for the unreliability of the scoring, by the sample itself of which we had no description, by a combination of these, or by some other altogether unrelated factor is uncertain. It is also curious that no significant relationship between socio-economic status and drawing achievement was found since findings did show a significant relationship between ratio IQ and drawing achievement, as well as between ratio IQ and socio-economic status.

In another more comprehensive spatial task with sample larger than either Eisner's or Stansfield's significant differences were found in the use of distance and overlap-perspective techniques between children from low metropolitan areas and high metropolitan areas ranging from 16 percentage points at age nine, to 20 percentage points at age seventeen. This study reported by the National Assessment of Educational Progress (1977) is but a further reason to question Stansfield's findings, the nature of the sample or the reliability of the scoring. Although there is a subject heading *Conclusions and Implications,* the purposes and implications of this study still remain obscure. One statement that "drawing ability could be predicted and used as a form of counseling in the school system," even if drawing ability were to be predicted, does not make clear what kind of counseling is being referred to or to what end. It is again possible that this is merely a misreading and misconception of Eisner's statement that "if stages are viewed, as I have suggested they might be viewed, as learned technologies employed to treat visual phenomena, then the assessment of stages may be not only a descriptive act but an evaluative one as well."

Reviewer's Commentary

In Tallahassee, Florida, where the landscape is in low profile, there is an imposing round twelve-storied Holiday Inn, standing out conspicuously from the smaller buildings that surround it. The spare whitewashed one-story

building next door houses an appliance store whose radio advertisements blatantly declare, "The round Holiday Inn is next to us."

In Stansfield's declarations that "the research of Barnes, Lewis, and Eisner . . . (support) the findings of this study" and that "this finding was consistent with the research of Dewey, Villeman, Champlin, and Ecker," one wonders if the claims might not be stated in a more modest manner. This is certainly so in light of the fact that these "findings," i.e., that drawing achievement develops with age, and that there was a statistically significant relationship between ratio IQ and drawing achievement, can be considered as given and therefore add no new insights to the research of the field.

The judgment of this reviewer is that this dissertation which is perhaps a mere 1,000 words or so longer than the Eisner *Studies* article upon which it obviously draws so heavily was useful only as an exercise and that, regretfully, the important statements and insights of Eisner's study which might have made for a useful piece of inquiry were ignored.

References

Design and drawing skills: selected results from the first National Assessment of art (Art Report No. 06-A-01). Denver, Colo.: National Assessment of Educational Progress, June 1977.

Eisner, E. *Educating artistic vision.* New York: Macmillan Company, 1972.

Eisner, E. The drawings of the disadvantaged: a comparative study. *Studies in Art Education,* 1969, **11**(1), 5-19.

Lewis, H. Peregrinations in child art. *Studies in Art Education,* 1976, **17**(2), 9-17.

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AN EXPERIMENTAL STUDY TO DETERMINE THE INFLUENCE OF A CROSS CULTURAL LEARNING EXPERIENCE ON AESTHETIC SENSITIVITY UNDERSTANDING AND JUDGMENT

Chi Chong Lee, Ph.D.
University of Minnesota, 1976

Abstract

The Problem

The primary purpose of this study is to determine to what extent a well structured, Oriental aesthetic principles and values study program can influence the aesthetic sensitivity, understanding and value judgment of students in an American college.

Collection of Data

Subjects used in this study were students who enrolled in the Studio Art Basic Design course and Art Education Survey course in the University of North Carolina at Chapel Hill. Each class of students was divided into two groups according to their enrolled sections. One section of the class was used as control group, another as experimental group. No effort was made to alter the course material, except the experimental groups received extra Oriental aesthetic and art theories instruction once a week, 20 minutes each time, for 10 weeks. The study was conducted during the Spring semester of 1973.

Criterion Measures

The data were collected to ascertain differences in the general development of aesthetic sensitivity and aesthetic judgment. To assess differences in aesthetic sensitivity development on Western art, the *Art Judgment Test (I)* by Norman Meier and *Aesthetic Judgment Test* by Irvin Child were used. On Oriental art, the *Oriental Art Test* developed by the investigator herself was used.

Tests were given before and after the experiment to both the experimental and control groups. All tests were presented to students in slide comparison form. Students were told to mark their answers according to their preferences.

Statistical Analysis

To test the null hypotheses, a two way analysis of variance was used. It is found that: There was no difference in means between the control groups and experimental groups on the pretest of either measure for the Studio Art subjects and Art Education subjects. Both experimental groups made large gains on the Oriental and Western measures, while the two control groups showed slight losses on the Oriental measure and little gains on the Western measure. There was an indication of interaction because the experimental treatment out performed those in the control treatment in both groups. Studio Art subjects on the average improved more than those in the Art Education program. All hypotheses relating to the two main effects (backgrounds and treatments) and the interactions were rejected at the 1% level of confidence.

Conclusion

1. The Oriental aesthetics and art theories instruction used in the study had an effect on the development of

Oriental aesthetic sensibility. This finding was supported by the result of the post-testing of experimental groups of Studio Art and Art Education subjects, and 2. the instruction of the Oriental aesthetics and art theories has not only helped improve subjects' development of aesthetic sensibility on the Oriental art but also implemented the development of sensibility, understanding and judgment regarding general aesthetic principles and values of the subjects' own culture-Western culture. Also 3. the development of one's aesthetic sensitivity is based on the understanding of one's own culture and aesthetic principles and values. 4. When a new cultural aesthetics is introduced to two groups of students, and when one group has a higher standard of knowledge than the other, the group with a higher knowledge will benefit more than the one with less knowledge. This is supported by the findings that the Studio Art groups generally scored higher than the Art Education groups in both Oriental and Western tests.

Recommendations for Further Study

Should there be any modification on the existing Oriental Art Test and is it possible to develop this kind of aesthetic program into an independent art course, would constitute valuable areas for further study.

Review

Denise Hickey
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Statement of the Problem

This study has grown out of the researcher's belief that art educators have a responsibility to develop in students "a sense of sympathy and respect for people in different cultures with their different values and social practices" and that this understanding can be promoted through art experiences. Lee's study was designed specifically to test the efficacy of an Oriental aesthetic program in increasing aesthetic sensitivity in college art students as judged by performance in both Eastern and Western aesthetic judgment tests.

Four questions already addressed by other art educators, researchers and aestheticians were seen to be critical as structural bases for her study. These were:

1. What are the main differences that exist between Western and Oriental aesthetics?
2. What are the similarities, if any, that exist between Western and Oriental aesthetics?
3. What are the main factors that cause similarities and differences in aesthetic judgments of combined art evaluations between the Western and the Oriental?
4. Is it possible to increase one's aesthetic sensitivity by increasing one's knowledge of aesthetics and art theory in one's own culture?

In the introductory chapter the researcher enumerated several principles on which Western aesthetics was based (Bevlin) and the interests from which these principles were derived (Osborne). She posited that Western aesthetics needed to be approached objectively while Oriental aesthetics, being built on religious and metaphysical concepts, required a less organic and rational approach. A brief outline of the Six Canons of Chinese aesthetics was intended to reveal the contrast in attitudes and thought between Eastern and Western aesthetics.

Related Research

Lee examined research in several areas, namely, aesthetic judgment, preference and sensitivity in art, cross-cultural aesthetics in art education and Oriental aesthetics and art theory. She

reported in a descriptive, chronological fashion on the tests devised by Eysenck and Maitland Graves, the Meier-Seashore Art Judgment Tests, the Barron-Welsh Art Scale and data collected by Bulley, Kieselbach, Sealherst, Kendrick, Miles and Child. In her review of cross-cultural aesthetics in art education she reported that tests carried out by Dennis, Dennis and Raskin and Badri supported the hypothesis that a child's drawing ability was a result of his experience with looking, with materials and with other prior learnings and practices. She noted that studies carried out by Child and Sumike Iwao indicated that there was some tendency towards a transcultural agreement in aesthetic evaluation. Her review of Oriental aesthetics and art theory pertained, in the main, to Chinese Art. The Six Canons of painting and drawing were seen to be the basis of Oriental aesthetics.

Although the review of research was well organized in each area, the researcher did not adequately synthesize the research to provide the theoretical framework upon which her own study was to be structured. For example, at no stage, either in this context or in the other parts of the study, did Lee describe how she developed her own Oriental aesthetic judgment test. All that is known is that it purports to be based on the Six Canons of Chinese Art. The paired picture samples of the test appear in the appendix as a fait accompli with no rationale or explanation. This is a serious omission in the study.

Research Objectives

The research objectives of the study were stated in the following questions:

1. Are there any significant differences in the development of aesthetic sensitivity between the experimental group and the control group when compared?

2. Is there any change in attitudes as measured by the Oriental aesthetic judgment test between the pre-test and the post-test?

3. Is there any change in attitudes as measured by the Western aesthetic judgment test — the *Meier Art Judgment Test* and the Irvin Child *Aesthetic Judgment Test* — between the pre-test and the post-test?

4. Is there any difference between the two classes — the Studio Art groups and the Art Education groups?

One problem this reviewer had with the above concerned the terminology used. Lee has provided definitions for the terms aesthetic judgment, aesthetic preference and aesthetic sensitivity but has used the term "attitude" without clarifying its precise meaning. If a change in attitude is central to research hypotheses 2 and 3 it needs to be known whether attitude refers to aesthetic preference, or aesthetic sensitivity as evidenced by particular aesthetic preferences or judgments, or values which affect the choices made.

Methodology

The population for this study consisted of two groups of 50 students enrolled respectively in a studio art course entitled Basic Design I and an art education course. The studio art group were art majors while the art education group were elementary education students with little art background. Neither group had previously participated in either formal or informal courses in Oriental art. A final selection for each group was made after the total group had completed the pre-tests. Those whose scores were too high or too low or who had completed too many or too few art courses were eliminated from the sample.

Two pre-tests were given to all subjects. The first was the Western Aesthetic Judgment Test consisting of two tests, the *Meier Art Judgment Test* and

Child's *Aesthetic Judgment Test.* The second test was the Oriental Art Judgment Test designed by the investigator. The treatment consisted of 10 weekly sessions of about 20 minutes duration added to a normal class session. The content of these lessons was described in detail. These lessons took the form of "slide presentation discussions." At the conclusion of the treatment the Western and Eastern aesthetic judgment tests were again administered to all participants in the study.

As has previously been stated no rationale had been given for the Oriental Art Test other than that it was based on the Six Canons of Chinese aesthetics as outlined by Lee. A description, however detailed, of the Six Canons together with six examples of some of the pairs of slides used in the test demonstrates inadequate devising and/or reporting of test construction. Further, no validation of the Oriental Aesthetic Judgment Test was undertaken before it was used in the study. As a result doubts are cast on the reported results of the study.

A second area of concern was the treatment undergone by the experimental group. Lee described the content of each of the 10 lessons in adequate detail and stated that "extensive cultural information was provided in the slide presentation discussions." She added that "sometimes the investigator set up physical as well as intellectual situations to help the understanding of the Oriental materials." No further clarification of strategies employed or of actual visual material shown and discussed was made. The researcher indicated too that the tasks designed for the ordinary class lesson around which the treatment was organized "were designed so that the experimental subjects would solve their art problem with the experienced Oriental aesthetic approaches." These tasks were not described.

Besides the questions these issues raise concerning the validity of the results of the present study, the inadequate reporting of the testing instrument and the unclear nature of the treatment would make replication of the study difficult for another researcher.

The statistical methods employed to analyze data collected were appropriate. The data was analyzed and set out clearly.

Results and Discussions

The analysis of the data resulted in the acceptance of Hypotheses I, II, III, and IV which projected that there would be no mean difference in the pre-test between the experimental and control groups in both the studio art and art education classes and that there would be no difference between student background information with regard to both the Oriental and Western art judgment tests. Hypotheses V to X were rejected at the .01 level of significance. The experimental groups made larger gains on both the Oriental and Western judgment tests than did the control groups but the studio art group showed greater improvement on both tests than did the art education group. The researcher concluded that the instruction in Oriental aesthetics had an effect not only on the development of Oriental aesthetic sensibility but apparently "implemented the development of sensibility, understanding and judgment relating to general aesthetic principles and values of the subjects' own culture." It was pointed out that further investigations might establish more clearly the amount of increase in aesthetic sensitivity relative to the amount of instruction provided.

Reviewer's Commentary

The objectives of this study were worthy ones. Despite the investigator's competent overview of related re-

search, serious difficulties were encountered in providing a rationale based on the interrelationship of the research areas reviewed. The way in which the Oriental aesthetic judgment testing instrument was derived and validated was also not clear. A truly cross-cultural study involving subjects from two separate cultures which were different, for example, from a third culture used in the treatment program, might provide further insights into this area of cross-cultural aesthetics.

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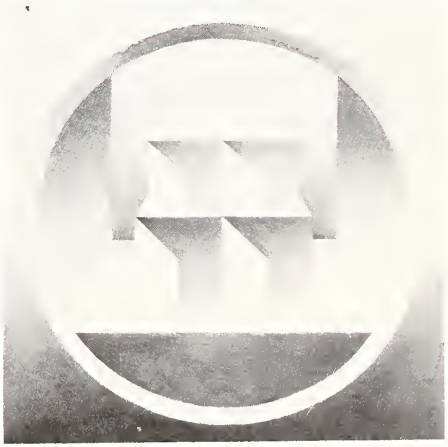

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